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Poster Proceedings

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Poster Session 1

No. 1

An Unusual Case of Recurrent Cannabis-Induced Flashbacks

Poster Presenter: Alexander Maksymenko, M.D.
Co-Authors: Adenike Ishola, M.D., M.P.H., Tolulope A. Olupona, M.D., Oluwole Jegede, M.D., Kodjovi Kodjo, M.D., Mario Gustave, M.D., Ayodeji Jolayemi, M.D.

SUMMARY:
Introduction: Flashbacks are sudden, involuntary, and vivid memories of past personal experiences. In many cases, these powerful memories are closely linked with traumatic events. The association of psychedelic drugs such as Lysergic acid diethylamide (LSD) or Phencyclidine (PCP) with flashbacks is well documented, however, although the association of Cannabis with flashbacks is well known, such phenomena are not well documented and its physiology still appears elusive. The use of cannabis in the United States is still considered illegal under federal law, however according to the 2013 surveys of National Institute of Health (NIH), marijuana use has increased dramatically over the past decade. Although, about 9.5 percent of Americans reported use of marijuana, 30 percent of users meet the criteria of cannabis use disorder. Cannabis induced flashbacks can be misdiagnosed as hallucinations or can overlap psychotic symptoms. Case Summary: We report the case of a 35-year-old African American woman with a past medical history of HIV and an unclear psychiatric history. The patient was brought to the Emergency Department by EMS activated by her husband for a psychiatric evaluation. She was reported to be acting odd and bizarre, disorganized, and talking to herself. A review of the patient's medical records showed a past history of auditory hallucinations and paranoia following her use of K2. On further evaluation, the patient stated that her symptoms were precipitated specifically by the scent of her husband's fragrance. She describes a recurrence of these episodes. She further relates a relationship between her symptoms and her heavy marijuana use, she endorses smoking "a few blunts" two days before the incident. The patient stated that she always gets flashbacks of her sister's death each time she smells the peculiar scent of her husband's cologne. The patient was treated with Risperidone 1 mg PO daily for Cannabis induced psychotic disorder. The patient's symptoms responded well to a trial of antipsychotics along with psychotherapy. Her symptoms subsequently resolved and she was discharged with aftercare follow-up. Discussion: Cannabis is a psychoactive drug which is widely consumed in industrialized countries and around the world. One of the described effects of Cannabis use include the flashback phenomena. With psychedelic agents, flashbacks often occur as transient, spontaneous recurrences of the drug effect and it tends to appear after a period following use particularly in heavy users. The individual usually re-experiences a visual hallucination or other perceptual disturbance triggered by a familiar smell that takes them back to a special or poignant moment like in our index case. This case illustrates the clinical presentation of cannabis use which might have triggered flashbacks in a young African American woman.

No. 2

Little Known Substance, Kratom, Causing Opioid Like Withdrawal in 57-Year-Old Patient Seeking Detox

Poster Presenter: Ashley Bindshedler, D.O.

SUMMARY:
A 59-year-old Caucasian male with a past psychiatric history of alcohol use disorder, cocaine use disorder, and opioid use disorder and cured Hepatitis C presented voluntarily for kratom detoxification. Kratom is a plant based substance with active ingredient of Mitragynine, a supraspinal mu and delta agonist with a 3.5 hour half life. Kratom has been used historically as a stimulant or for pain relief by ingesting raw leaves or steeping them in tea, other methods include ingesting capsules or smoking the leaves. This patient began taking 42 capsules spread out over the course of the day for 5 weeks with last use being 1 day prior to admission. While on kratom, the patient experienced symptoms of euphoria and relaxation. He reported withdrawal symptoms of anxiety, nausea, mild constipation, irritability, fatigue, myalgias, cravings and poor sleep. He denied depression, suicidal/homicidal thoughts, hallucinations, or delusions. He was

medically cleared, admitted to the psychiatry unit and successfully detoxed off kratom with the opioid withdrawal protocol of Clonidine 0.1 mg TID PRN, methocarbamol 1500 QID PRN, loperamide PRN and ondansetron PRN which the patient found helpful. There have been other case reports where patients have used kratom to manage their chronic pain and detoxify off opioids. There have also been reports where kratom may have been a contributor to patient death. The purpose of this project is to remind providers that new substances will continue to be used by patients and it is important to stay educated on these substances. Specifically, this project will address the pharmacology and the symptoms of intoxication, withdrawal and proposed treatment modalities for kratom use and share different resources providers can use to learn about new substances.

No. 3

Development and Validation of Selfie Addiction Scale

Poster Presenter: Awadhesh P. Singh Solanki, M.B.B.S.

SUMMARY:

Aims and Objectives The aim of this study was to develop a self-diagnostic Selfie Addiction Scale. In addition, the reliability and validity of the Selfie Addiction Scale was demonstrated. Background This is probably first Selfie Addiction Scale developed according to different sources. Method A total of 200 participants were recruited from July to September 2015 to complete a set of questionnaires including 47 items. The participants consisted of 88 boys and 112 girls; with ages ranging from 18 to 28 years (Mean=21.15, SD=2.95 years). Factor analysis, t-test, ANOVA, and correlation analysis were conducted to verify the reliability and validity of this scale. For concurrent validity we used Smartphone Addiction Scale-Short Version (SAS-SV), Internet Addiction Test (IAT) by Dr. Kimberly Young, Measure of Body Apperception (MBA), Visual Analogue Scale (VAS), Barratt Impulsiveness Scale (BIS-11), Rosenberg-self Esteem Scale, Narcissistic Personality Inventory (NPI16) , CAGE questionnaire and substance dependence and abuse diagnosis of DSM-V. Results The internal consistency and concurrent validity of selfie addiction scale were verified (Cronbach's alpha?=?0.962). Selfie Addiction Scale and its sub-scales were significantly correlated with other scales. The visual analogue scale of each factor also showed a significant correlation with each sub-scale. Conclusions As selfie is becoming a new form of addiction among people in the community, Selfie Addiction Scale which showed good reliability and validity for the assessment of selfie addiction can be used efficiently for the evaluation of selfie addiction in the community and for the research purposes. In addition, it also showed correlation with related psychopathology of the respondent in study population. This scale also covers different domains like narcissistic personality, feeling of self worth, body apperception and body dysmorphic disorder. Ultimately it will help to prevent harmful effects of selfie addiction.

No. 4

Smartphone and Internet Addiction in School Going Children and Associated Psychopathologies

Poster Presenter: Awadhesh P. Singh Solanki, M.B.B.S.

SUMMARY:

AIMS AND HYPOTHESIS The aim of the study was to find out the effect of smartphone and internet use and its associated psychopathology in school children. BACKGROUND Smartphone and internet use among school going children have increased exponentially and its effects on school going children were rarely explored before. METHOD A total of 511 school students from class 1-12 from different urban schools of Kolkata were included in this study from February 2015 to January 2016 to complete a set of questionnaires including demographic details, smartphone addiction scale short version, internet addiction test, teacher's and self-version of Strength and difficulty questionnaire (SDQ). The participants consisted of 413 boys and 98 girls; with ages ranging from 6 to 18 years (Mean=10.81, SD=1.8 years). For measuring the difference between various socio-demographic, clinical & neuropsychological variables, chi square, ANOVA and t-Tests were applied. Spearman's correlation coefficient was used to determine correlation, if any, between the variables. RESULTS Total 25.2% school going children were found addicted to smartphones and 27.8% were moderate and severe internet users. Students

who were having smartphone addiction were having poor grades, significantly higher emotional and conduct problems, more hyperactive and having peer relationships problems, low poor prosocial scores and they were less social and less interactive with others. Overall they were having more difficulties and negative impact of smartphone in their lives. Internet and smartphone addiction both are significantly correlated with each other as smartphone is providing easy internet interface and most of the apps are based on internet connectivity and providing virtual social platform. Children of class 1st to 5th who were having both working parents were having higher smartphone addiction rate. CONCLUSIONS Ultimately this study has shown that excessive smartphone and internet use in children should be monitored and this is a myth that smartphone is making our children smarter. On the contrary it causes scholastic performance deterioration, poor peer interaction and psychopathology. Working parents don't have time to monitor their children, internet and smartphone use due to work pressure and they feel convenient as child doesn't disturb them when they are busy with work which needs to be dealt with.

No. 5

Marijuana Laced With Embalming Fluid Causing Seizures: Is Formaldehyde the Culprit?

Poster Presenter: Bishara Bhasi, M.D.
Co-Author: Najeeb U. Hussain, M.D.

SUMMARY:

Marijuana laced with embalming fluid causing seizures: Is formaldehyde the culprit? Co authors Bishara Bhasi, MD; Najeeb Hussain, MD Abstract: 26 year old female with a past psychiatric history of schizophrenia and cannabis use disorder and no prior history of seizure disorder, who presented with multiple Emergency Room (ER) visits (total of 5) for multiple episodes of seizures in 1 week. During the patient's second ER visit, the patient was found on the streets, confused and was brought in by EMS, who noted that the patient may have been "smoking something". Patient admitted only to smoking cannabis, initially. Patient subsequently had a witnessed, generalized tonic-clonic seizure in the ER, sustained a lip bite, and had postictal confusion. Patient was admitted to the observation unit and neurology team was consulted. CT and MRI showed no acute changes or intracranial space occupying lesions. EEG showed diffuse slowing, without any epileptiform activity. Patient was started on antiepileptic drugs. She had no further episodes of seizures during the hospitalizations and was discharged home. Patient returned the same day, with another episode of seizure, which was attributed to seizure medication non-compliance at that time. Patient was loaded with the antiepileptic drug and discharged home. She subsequently presented to the ER with seizures, twice the next day, despite therapeutic blood levels of the antiepileptic drug. Psychiatry was consulted at that time. Patient then admitted to smoking marijuana laced with embalming fluid each time on her way back home, after discharge. During the multiple ER visits, patient's urine drug screen was consistently only positive for Cannabinoids and never for PCP. Patient was calm, cooperative and didn't show any signs of agitation, other than mild irritability on examination. She reported feeling like she was "stuck" and "couldn't move at times" and also explained that her joints felt hyperflexible at times. Marijuana laced with embalming fluid is a drug that has been around for centuries, however it has been gaining popularity lately. The contents of embalming fluid include formaldehyde, methanol and may also contain PCP, all of which may cause seizures at toxic levels. Urine drug screens usually detect PCP at a level more than 25 ng/ml. Furthermore, PCP causes seizures at levels more than 100 ng/ml. In the absence of PCP in Urine drug screen in the patient, it is unlikely that PCP is the main cause for the seizures. The absence of metabolic acidosis in the patient, also precludes methanol toxicity from being the main cause of the seizures. In this poster, we discuss the challenges of recognizing embalming fluid abuse and subsequent seizures and hypothesize the likely cause to be formaldehyde, a potent neurotoxin, in the embalming fluid.

No. 6

Caffeine-Induced Psychosis in a Bodybuilder With Chronic Testosterone and Amphetamine/Dextroamphetamine Misuse: A Case Report

Poster Presenter: Camila Albuquerque De Brito Gomes, M.D.

Co-Author: Yassir Osama Mahgoub, M.D.

SUMMARY:
Introduction:Caffeine is the world's most consumed psychoactive substance. It is also considered a performance-enhancing substance by some bodybuilders and is, sometimes, excessively used for this purpose. Caffeine's action on adenosine and dopamine receptors is well known, but many other studies reveal its action on testosterone and cortisol, and its possible implication with psychosis. We describe a case of brief psychotic episode following acute, excessive caffeine intake in a body builder with chronic testosterone and amphetamine/dextroamphetamine misuse. Methods:PubMed search for "caffeine", "psychosis", "Adderall", "testosterone", and "cortisol", and an unique case summary. Case report:48 year-old male, bodybuilder, with no medical or psychiatric history, admitted for new onset psychosis, with delusions of being able to predict the death of high profile government officials. He linked his predictions to religion, major astrological events, and developed interest in numerology science, which was out of character for him. He posted his beliefs on social media, which led to Secret Service involvement followed by psychiatric hospitalization. Prior to this episode, he was using unknown amounts of non-prescribed testosterone and amphetamine/dextroamphetamine 60mg daily as performance-enhancing substance in cyclical fashion, for 7 months each year, for the last 4 years. There was no past history of psychosis or any other psychiatric disorder, despite his regular misuse of testosterone and amphetamine/dextroamphetamine. He reported finishing his last cycle of the mentioned substances, a few days prior to his psychosis emergence. This was followed by an increased amount of caffeine ingestion, drinking a minimum of seven espressos each morning (?560mg of caffeine), instead of his usual one daily cup (?80mg of caffeine). His urine toxicology on admission was positive for amphetamines. His psychosis resolved 5 days later, without antipsychotics, as per patient's choice. He was discharged home with secret service notification, outpatient follow up and strong recommendations against using the above combination. Discussion:Several performance-enhancing substances have been implicated with psychosis and mood disorders, such as anabolic steroids, and amphetemine/dextroamphetamine. Although those substances have been reported to cause psychosis independently, our patient was never psychotic despite using them regularly for the last 4 years. There was no recent change in pattern or amount of their use. His psychosis occurred with the recent, excessive caffeine intake, which could possibly cause psychosis by itself or synergistically with another performance-enhancing substance. Conclusion:Caffeine might interact synergistically with other performance-enhancing substances, resulting in increased levels of cortisol and/ or testosterone, and could potentially cause psychosis.

No. 7
WITHDRAWN

No. 8
Signing Out Against Medical Advice in a Rehab Setting: A Retrospective Study
Poster Presenter: Charles Rodolphe Odom, M.D.
Co-Authors: Frozan Walyzada, M.D., Rachael Griffin, Margarita Abramovich, Kenny Hernandez, Rachel Schoolcraft

SUMMARY:
Background: Discharge against medical advice (AMA) occurs when a patient chooses to leave before the treating physician has recommended discharge. Patients who leave AMA often present with challenging care as they are more likely to have worse outcomes and are rehospitalized more often than patients who complete treatment (Pages et al ; 1998). Studies have consistently demonstrated that patients who suffer from substance abuse are more likely to leave AMA (Jeffer; 1993). Between 6% and 35% of psychiatric patients discharged themselves from hospital AMA (Dalrymple ; 1993). Few studies have been done which analyze the reasons for AMA in an addiction rehabilitation setting. A study conducted by Lekas et al examined the role of patient-provider interactions contributing to AMA discharge. Inadequate pain management, dissatisfaction with medical care, hospital fatigue (defined as a longing to return to one's home), and everyday life issues were significant factors contributing to AMA in a general hospital setting.

Methods: We will review retrospectively the charts from an in-patient rehab setting in an underserved area between July 2015 to June 2017 to identify the reasons patients sign out AMA and assess correlations to substance abuse, demographics, psychiatric, and medical comorbidities. Conclusion: This retrospective analysis aims to investigate, as well as understand, the influence of patient provider encounter on Rehab AMA discharges. We hope to enhance the development of interventions to prevent AMA, thereby improving patient outcome, promoting retention in an addiction rehab program, and increasing cost effectiveness of treatment.

No. 9

Mind Over Substance? The Role of Mindfulness-Based Interventions in Treating Substance Use Disorders

Poster Presenter: Claire Sathe
Co-Author: Rashi Aggarwal, M.D.

SUMMARY:

Objective: Many patients with a substance use disorder (SUD) fail to achieve long-term recovery with standard pharmacological and behavioral approaches. As a result, the research is increasingly turning to alternative therapies, including mindfulness-based interventions (MBIs). MBIs focus on developing patients' non-judgmental awareness of present experience so that they recognize cognitive or affective states that have previously triggered relapse and avoid the habitual response of substance use. This literature review examines studies that have investigated the effectiveness of MBIs in the treatment of SUDs. Method: Literature review was done on PubMed by using the keywords "mindfulness" and "substance use disorder" or "addiction." We limited our research to English language publications. Results: 28 studies were reviewed, including 23 primary studies and 5 secondary analyses. Of the 23 primary studies, 16 were randomized controlled trials. Participants were affected by SUDs involving illicit drugs, alcohol, and/or tobacco. MBIs tested ranged from a brief mindfulness-based instruction to weekly group sessions over several months. Importantly, many of the studies suffer from major limitations, including small sample size, high attrition rates, and lack of long-term follow-up. The vast majority of the studies found that MBIs were effective either in decreasing cravings, reducing substance use, or preventing relapse after abstinence. Several studies also found a positive relationship between MBIs and markers of mental health in SUD patients such as decreased stress and increased social functioning. Some studies found that the positive impact of MBIs was more pronounced for ethnic or racial minorities and women, perhaps due to the individualized and experiential focus of MBIs. A few of the studies reviewed showed limited or no efficacy of MBIs in treating SUDs. In one study, the benefits of MBIs were restricted to patients with co-occurring psychiatric conditions. Another study found that the MBI tested did not affect abstinence rate for smokers, though it did increase chances of recovery after a lapse. A single study found that the MBI tested was less effective than a distraction-based strategy at reducing cravings of alcohol-dependent participants. However, the MBI tested in this study consisted in a brief mindfulness-based instruction designed as an acute-setting coping strategy. By contrast, a running theme throughout many studies is that frequent formal practice at home is key to maximizing the benefits of MBIs, which tend to develop over time. Conclusion: Numerous studies suggest that MBIs could become a promising new avenue to supplement current pharmacological and behavioral treatments for SUDs. However, a wide range of MBIs was investigated in those studies, with varying outcomes. Further studies would be required to confirm the benefits of MBIs and to assess which types of MBIs are most effective in promoting long-term recovery.

No. 10

Measures Undertaken at the University of Maryland Medical System in Response to the Opioid Endemic in Baltimore

Poster Presenter: Dileep Sreedharan, D.O.
Co-Authors: Mariam Elizabeth Faris, D.O., Lauren Laddaran, D.O., Avinash Ramprashad, M.D., Eric Weintraub, M.D., Christopher J. Welsh, M.D.

SUMMARY:

The US is in the midst of an opioid epidemic. More than 30,000 people have died from prescription and illicit opioid overdose in 2015. In Maryland alone, between 2015 and 2016, the number of heroin

related deaths increased by 62% (1212 deaths), prescription opioid related deaths increased by 19% (418 deaths) and fentanyl-related deaths increased by 76% (1119 deaths). The city of Baltimore has witnessed a dramatic surge in opioid related deaths in recent years. This poster describes three different programs that have been initiated at the UMMS in response to the opioid epidemic. The goal of these programs is to engage opioid dependent patients in the Emergency Department (ED) in substance abuse treatment. These include the Screening, Brief Intervention, and Referral to Treatment (SBIRT) project, an ED buprenorphine initiative, and a buprenorphine bridge clinic. An SBIRT program for ED patients is a city-wide initiative, utilizing peer recovery coaches with the intent of screening and providing interventions to all adult ED patients who are at risk for substance use. Once evaluated, these patients are referred to treatment and are closely followed up. While SBIRT has been demonstrated to be effective in certain populations, a recent report showed that SBIRT alone was only marginally effective in patients with severe substance use disorders in the ED setting. Subsequently, UMMS developed a protocol that utilizes early initiation of pharmacotherapy (buprenorphine) for patients with opioid dependence. Emerging literature demonstrated that ED initiated buprenorphine treatment was found to significantly decrease opioid use and increase engagement in outpatient substance abuse treatment. Hence, an initiative was undertaken at UMMS to train ED physicians to identify appropriate patients and begin buprenorphine induction in the ED. Using an algorithm developed by substance abuse specialists, the ED physicians are provided access to inclusion and exclusion criteria, recommended laboratory tests, dosing, and potential side effects including precipitated withdrawal. Finally, in conjunction with the Psychiatric Emergency Services (PES), a buprenorphine bridge clinic was developed to address the significant shortage of community providers able and willing to immediately treat patients with opioid agonist therapy. The bridge clinic allows patients to receive continued opioid agonist treatment in the period between ER visit and outpatient intake, thus increasing the likelihood of successfully engaging in treatment. Working in Baltimore has given us the opportunity to gain ample clinical experience working with individuals with opioid use disorders and have helped us identify some innovative strategies for engaging these individuals in treatment. We will provide data and guidelines for the identification, intervention, and treatment of opioid use disorder in the ED setting based upon these three initiatives that have been put into place at UMMS.

No. 11

Prevalence of Substance Use Disorders in a Psychogeriatric Outpatient Clinic

Poster Presenter: Erika Maynard, M.D.

SUMMARY:

Prevalence of Substance Use Disorders in a Psychogeriatric Outpatient Clinic Dr. Erika Maynard, MD Leah Stalnaker, MSIV Dr. Ruthie Cooper, MD Mallory Morris, MSIV Henry Heisy, MSIV Dr. Suzanne Holroyd, MD The purpose of this study was to determine the prevalence of substance use disorders- specifically disorders involving alcohol, narcotics, benzodiazepines, marijuana, and stimulants as well as caffeine and tobacco - in a geriatric psychiatry outpatient clinic population. As the baby boom generation ages, the number of geriatric patients will increase from 40.3 million to 72.1 million between 2010 and 2030. The hope of collecting and presenting this data is that physicians will be better prepared to detect and treat substance use disorders in the growing geriatric population, as they can increase the risk for both medical and psychiatric morbidity. There is a dearth of literature regarding substance abuse among older adults. There are likely several reasons for this, including generational stereotyping, discomfort, inaccurate self-reporting, and misinterpretation of physical symptoms as normal consequences of aging. However, the United States geriatric population is known to have the highest rate of substance use disorder of the developed countries, and the aging baby boom generation has a higher prevalence of substance use than prior generations. In previous years, alcohol use disorder has been the most prevalent substance use disorder amongst older adults, however, it is unclear whether this has changed as the rate of opiate addiction in the United States continues to rise. In this study, 200 patients ages 60 and above who were treated in an

outpatient psychogeriatric clinic were examined by retrospective chart review for presence of substance use disorders. Demographic and clinical variables were also collected including age, sex, race, education level, living arrangements, prescribed controlled substances, mental status exam scores, comorbid medical conditions and comorbid psychiatric conditions. Data was entered into SPSS and examined. Results are presented and discussed, especially as they related to the existing known literature.

No. 12

Opioid-Induced Catatonia in a Middle-Aged Woman: Case Report and Literature Review

Poster Presenter: Fabrizzio A. Delgado, M.D.
Co-Author: Maria Velasco

SUMMARY:

The case we present is of a 40 year old female with history of opioid use disorder who was brought in the emergency department. She was unresponsive to questions, showed signs of waxy flexibility, fixed posturing and catalepsy with Busch and Francis catatonia scale (BFCS) score of 17. Patient had been seen two times previously on the same day because of heroin use and occasional auditory hallucinations. Opiates, methadone and benzodiazepines (after challenge) were positive on urine toxicology. Patient was given lorazepam challenge IM route and the patient became more verbal and responsive to external stimuli. Two hours later patient became agitated, was praying loud, and presented purposeless movements and dancing mannerisms. She was given 2 mg PO of lorazepam was given with little to no effect. 30 minutes later patient continue to be agitated and broke her glasses, she was then given 1MG of lorazepam IM route with resolution of symptoms. Catatonia is a disorder that used to be described as rare. Prospective studies at individual psychiatric units describe an incidence ranging from 5-20%. (1) It is characterized by stupor/akinesia, catalepsy, waxy flexibility, mutism, negativism, posturing, mannerisms, stereotypy, agitation, echolalia and echopraxia. (3) Catatonia can be seen as part of a mood or psychotic disorders (2) (4). It can also be secondary to a variety of medical conditions including neurological disorders, infections and metabolic disturbances (5). Catatonia can be also secondary to medications and substances such as corticosteroids, immunosuppressants, clomipramine, antipsychotics, methylphenidate, cocaine, PCP, and as in this case, by high doses of opioids (4, 5,7,9,11). The pathophysiology of Catatonia is complex. It includes alterations in dopamine. Disturbances in serotoninergic, GABA, (4,5) norepinephrine and glutamate systems. Iron channel abnormalities, dysfunction of frontal, neocortical, limbic and even brain stem circuitry are suspected. (8,6) Systemic opioid administration can increase muscle tone and induce muscle rigidity. This is probably related to a catatonic state (7) and is different from the akinetic state with no muscular rigidity produced by injections into the Nucleus Accumbens. This findings suggests interference of at least two different topographic locations involved in the opioid induced akinesia and muscular rigidity of catatonia.(8) In a time when heroin and prescription opioids has increased across the US among men, women, most age groups and all income levels (14) we present a case of a potentially fatal consequence of the use of opioids. The pathophysiology of this disorder is not completely understood and should be a focus of our research. Increased awareness is needed for identification of catatonia and its prompt treatment in this population. Rating scales and screening instruments are reliable and a valid tool that facilitates diagnosis and treatment protocols for catatonia. (13)

No. 13

Anticonvulsants as an Alternative or Adjunct to Treat Alcohol Withdrawal: A Systematic Review

Poster Presenter: Fnu Syeda Arshiya Farheen, M.B.B.S.
Lead Author: Aarti Govind Chhatlani, M.D.
Co-Authors: Madhuri Jakkam Setty, M.B.B.S., Geetha Manikkara, Rajesh R. Tampi, M.D., M.S.

SUMMARY:

Background: There is growing evidence that anticonvulsants are a safe alternative to treat alcohol withdrawal or they may be an appropriate adjunct. Objective: To systematically review literature to evaluate the data available on commonly used anticonvulsants as monotherapy or adjunct to treat alcohol withdrawal. Methods: We

performed a literature search of Pubmed, PsychINFO, MEDLINE and Cochran databases through 31 August 2016, using the following keywords: “alcohol withdrawal”, “valproate”, “gabapentin”, “lamotrigine”, “carbamazepine” and “oxcarbazepine”. The search was not restricted by language but in the final analysis only studies that were published in English or had official English translations were included. Results: The systematic review of literature identified a total of 23 double blind randomized controlled trials that evaluated the use of anticonvulsants in treatment of alcohol withdrawal. Of these studies, seven focused on patients in outpatient setting. While sixteen studies focused on patients that were admitted and four studies did not specify the setting. According to the literature, anticonvulsants are just as effective as sedatives/hypnotics in treating mild or moderate alcohol withdrawal symptoms. Six studies evaluated the use of anticonvulsants as adjuncts to sedatives/hypnotics. Combining anticonvulsants with sedatives decreases the quantity of sedatives required to treat withdrawal symptoms and the symptoms resolve quicker. There is some data that gabapentin, valproate and carbamazepine can be used to treat alcohol withdrawals as monotherapies. In addition, 20 of these studies looked at adverse effects. In one study patients experienced drug adverse effects and the study was terminated. In most studies, drop-out rates due to severe withdrawal or adverse effects were similar between control and anticonvulsant groups. The remaining studies identified minor adverse effects. Conclusion: Anticonvulsants have good efficacy as monotherapy and as adjuncts with sedatives /hypnotics in treating mild to moderate alcohol withdrawal syndrome. Anticonvulsants have less adverse effects and addiction potential compared to sedatives/hypnotics.

No. 14

Heroin-Induced Leukoencephalopathy: A Case Report and Literature Review

Poster Presenter: Fnu Syeda Arshiya Farheen, M.B.B.S.

Co-Authors: Juan Joseph Young, M.D., Rajesh R. Tampi, M.D., M.S., Venkatesh Sreeram, Ngu Aung

SUMMARY:

Objective: Toxic leukoencephalopathy is a rare neurologic disease. Our aim is to inform the cognitive and behavioral disturbance associated with toxic leukoencephalopathy [TLE] and heroin use along with imaging findings in a middle-aged woman. Design: Case report. Case presentation: A 49-year-old Caucasian women with history of Major Depressive Disorder, Post-Traumatic Stress Disorder, Generalized Anxiety Disorder and Heroin use disorder (sniffing heroin for more than 20 years) was admitted for altered mental status. She was disoriented with dissociative symptoms, impoverished thought content, blunted affect and distractibility. During her stay she was minimally responsive, stayed isolative and displayed bizarre behavior, was refusing food and fluid intake. Initially she was considered as in delirious state due to infectious etiology, as her urinalysis was positive for Leukocyte esterase and head Computed Tomography (CT) was normal, which later confirmed negative with urine culture and other labs including blood and cerebrospinal fluid (CSF) cell count and culture. She was also tested negative for other infectious pathologies including Hepatitis, Syphilis and Human Immunodeficiency Virus (HIV). Her magnetic resonance imaging (MRI) brain showed white matter lesions (Mild but diffused signal abnormality in the deep supratentorial white matter with mild diffusion restriction). She was admitted for 9 days with improvement in orientation, mood and spontaneous speech, but remained disorganized and paranoid in behavior. Discussion: TLE is an uncommon complication with heroin abuse. Inhalational heroin use by heating the drug has been studied as an implication in TLE, which typically termed as “Chasing the dragon” with first case identified in 1982. Few case reports reported the dose of heroin attained with inhalation is high, while few studies claimed heating produces a mediate toxic compound that cause TLE. TLE is characterized with deficits involving motor and cerebellar pathways, especially posterior limb of internal capsule involvement and spongiform myelinopathy with fluid overload in myelin sheaths. TLE that occur rarely with exclusion of cerebellar and brain stem involvement in cocaine abusers, reported better prognosis. Literature suggests the association of intravenous heroin with Hypoxic Ischemic Encephalopathy (HIE). While HIE is frequently

associated with gray matter changes in MRI, whereas no such involvement elicited in TLE. Coenzyme Q and other antioxidant therapy has been studied to demonstrate clinical improvement according to the literature. Conclusion: Toxic leucoencephalopathy associated with inhalational heroin use has been studied as rare, but has poor prognosis. The etiology and pathophysiology involved is poorly understood. We need more RCTs and Systematic reviews to understand the pathophysiology and to help with timely management of this debilitating neurological condition.

No. 15

Use of Cariprazine (Vrylar) in Psychiatric Disorders: Systematic Review

Poster Presenter: Fnu Syeda Arshiya Farheen, M.B.B.S.

Co-Authors: Aarti Govind Chhatlani, M.D., Madhuri Jakkam Setty, M.B.B.S., Geetha Manikkara, Rajesh R. Tampi, M.D., M.S.

SUMMARY:

Introduction: Cariprazine is a new, novel, atypical antipsychotic agent with Dopamine D2 and D3 partial agonist effects recently approved for treating schizophrenia, bipolar mania and in clinical trial phase 2 for depression in the USA. Objective: The purpose of this review is to systematically review literature to evaluate the safety and efficacy of cariprazine in psychiatric disorders (Schizophrenia, bipolar disorders, depression) in comparison with a placebo. Methods: We performed a literature search of PubMed, MEDLINE, EMBASE, PsycINFO and Cochrane collaboration databases through 31 August, 2016 using the following keywords: “cariprazine”, “depression”, “schizophrenia” and “bipolar disorder”. The search was not restricted by the age of the patients or the language of the study. However, in the final analysis the studies involving patients that were published in English or had official English translations were included. In addition, we reviewed the bibliographic databases of published articles for additional studies. Results: The systematic review of literature identified a total of 9 articles that evaluated the use of cariprazine in treatment of psychiatric disorders. There were 8 double blinded randomized controlled trials and 1 was analyses of pooled data from phase II/III trials; of these 50% were phase III trials (n=4) and phase II trials (n=4). Four of these evaluated the safety and efficacy of Cariprazine in Bipolar I depression, one investigated its use as an adjunct to antidepressants in Major depressive disorder (MDD) and three evaluated its use in treatment of acute exacerbation of Schizophrenia. Two studies used risperidone or aripiprazole as comparators in addition to placebo. Both low- and high-dose cariprazine were more effective than placebo in the treatment of acute manic or mixed episodes associated with bipolar I disorder and also Schizophrenia. As an adjunctive treatment, it showed efficacy in treatment of MDD patients as measured by change in MADRS total score. However, patients were selected based on inadequate antidepressant response, these results may not be generalized to all patients with MDD. The main cause of study discontinuation was mania or akathesia. Side effects were similar in all studies evaluated. Conclusions: This review has demonstrated modest safety, superior efficacy and good tolerability of cariprazine in treating psychosis, mania, and depression at both low and high dose in comparison to placebo. Cariprazine was generally well tolerated, however EPS-related treatment emergent adverse events were more common than with placebo particularly the incidence of akathisia was greater with cariprazine than with placebo

No. 16

Hallucinations as a Side Effect of Mirtazapine: A Case Report and Literature Review

Poster Presenter: Alexandra Berliner, M.D.

Co-Authors: Rashi Aggarwal, M.D., Tamkeen Khurshid, M.B.B.S.

SUMMARY:

Introduction: Mirtazapine is a commonly used antidepressant with a relatively safe side effect profile. Among all the side effects listed, hallucinations are an uncommon side effect that is relatively unknown. Here we describe our patient and review of the relevant literature. Case: We present a case of a 92 year old woman without any prior psychiatric history who initially presented to the hospital complaining of a tremor and muscle spasm in all 4 extremities that began several weeks ago. After an extensive work up, it was presumed to

be related to anxiety. In the outpatient clinic, she was started on mirtazapine 7.5 mg PO at bedtime. Patient developed new onset of visual hallucinations after the second dose of mirtazapine, which included visualizing crawling insects. Family noted that she appeared to be “pulling on strings” and waving things away from her. She continued to take mirtazapine for a total of 4 days prior to stopping as the hallucinations have worsened. Hallucinations began improving upon discontinuation of mirtazapine and fully resolved on the 3rd day of discontinuation. Results: Three other cases were reported in the literature, all the cases were in older patients (age >58). The hallucinations fully resolved once mirtazapine was either lowered in dose or discontinued. This case, along with the cases reviewed, suggests a relationship between mirtazapine use and development of hallucinations. The appearance of hallucinations directly after initiation of mirtazapine and the prompt resolution of hallucinations after drug discontinuation, led to the impression that this was a drug-induced phenomena. Mirtazapine is a tetracyclic antidepressant with noradrenergic and serotonergic activity. Mirtazapine also blocks histamine H1 receptors, which leads to sedation. It has also been shown that treatment with mirtazapine increases the dopamine levels in the frontal cortex, as a result of alpha2-adrenergic blockade. The exact pathophysiology of mirtazapine induced hallucinations remains unknown. Three hypotheses have been postulated in an attempt to explain the side effect. One hypothesis is the serotonergic delirium hypothesis, which is unlikely since none of the patients met the criteria for serotonin syndrome. Another hypothesis is the norepinephrine oversensitivity hypothesis and the last is the dopaminergic hypothesis. Oversensitivity to acute increases of norepinephrine following mirtazapine initiation is a possible explanation as centrally increased norepinephrine has been observed in certain types of delirium. Dopamine is a likely contributor to hallucinations as evidenced by the dopamine receptors playing a role in pathophysiology of schizophrenia. Discussion: The relative tolerability of mirtazapine, along with its side effect profile, makes it a first line medication for treating depression in elderly patients. Although uncommon, hallucinations can be a side effect of mirtazapine that patients and providers should become aware o

No. 17

Dose-Depedendent Duloxetine Hepatotoxicity: A Case of Idiosyncratic Drug-Induced Liver Injury

Poster Presenter: Areef S. Kassam, M.D.
Co-Author: Elizabeth Cunningham

SUMMARY:

Introduction: Duloxetine (Cymbalta®) inhibits the re-uptake of both serotonin and norepinephrine and is FDA approved for major depressive disorder, diabetic neuropathy, fibromyalgia, chronic musculoskeletal pain, and generalized anxiety disorder. While cases of hepatotoxicity with duloxetine have been documented, none have demonstrated a dose-dependent relationship. Objectives: The primary objective is to describe a case of drug-induced liver injury after a dosage increase of duloxetine. Case Discussion: We present a case of a 37 year old female with Major Depressive Disorder, Alcohol Use Disorder, and Opioid Use Disorder presenting with a depressive episode. She was started on duloxetine 40 mg daily then increased to 60mg in order to target residual depressive symptoms. Twenty four hours later, she had significant anxiety, bilateral tremor, hyperthermia, and autonomic instability. Physical exam was remarkable for right upper quadrant tenderness. Tests for viral hepatitis and auto-antibodies were negative. Table 1: Liver Function Tests Total Bilirubin Alkaline Phosphatase AST ALT Reference Range 0.1-1.2 mg/dL 38-126 U/L 17-59 U/L 11-58 U/L Baseline 0.4 mg/dL 57 U/L 20 U/L 12 U/L At Symptom Onset (A) 0.4 mg/dL 105 U/L 203 U/L 156 U/L 2 days after Discontinuation (B) 0.2 mg/dL 101 U/L 49 U/L 93 U/L 7 days after Discontinuation (C) 0.3mg/dL 83 U/L 25-37 U/L 37U/L The patient’s initial lab work revealed normal liver function tests upon admission (Table 1). All medications were held and the patient was given a normal saline bolus. Subsequently, the patient showed improvement of physical symptoms. Symptoms fully resolved and laboratory markers returned to baseline within one week of duloxetine discontinuation. Conclusion: This case offers an example of acute drug-induced liver injury occurring after a dosage increase of duloxetine. The onset of

symptoms and elevation in enzymes following a duloxetine dose increase support the etiology of a dose-dependent drug-induced liver injury in this patient.

No. 18

Assessment of Metabolic Syndrome in Patients Experiencing First-Episode Psychosis Treated With Antipsychotics

Poster Presenter: Ariba Shah

SUMMARY:

Although antipsychotic medications have been shown to affect lipid and glucose metabolism and a need for early monitoring has been identified, Canadian data on the metabolic side effects of antipsychotics in young patients in the early phase is scarce. The aim of this study was to quantify the risk of metabolic syndrome development over the initial 1-2 years of antipsychotic treatment in patients experiencing a first episode of psychosis and to examine adherence to metabolic screening in a real-world EPI program. We conducted a retrospective chart review of 52 patients, 14-35 years old, admitted to the Early Psychosis Intervention Program at Hotel Dieu Hospital, in Kingston, ON, Canada, from 2009-2016. This clinic has a multidisciplinary approach to care, with patients being followed up by an individually assigned case manager, clinic nurse and psychologist, in addition to a psychiatrist. To be included in our study, patients must have had at least one year of follow up from time of initial visit, and at least two time points where they had all measurements. Data was collected on age, sex, antipsychotic medication, Body Mass Index (BMI), waist circumference (WC), blood pressure (BP), high density lipoprotein (HDL), triglycerides (TG), fasting blood sugar (FBS)/ random glucose (RG), and HbA1C at initial visit, and follow ups at 3, 6, 12, 18, and 24 months. Metabolic Syndrome was defined using the International Diabetes Federation criteria. The percent of patients in this retrospective cohort with metabolic syndrome increased over time: 11%, 19%, 29%, 33%, and 35% at 0, 6, 12, 18, and 24 months respectively. Looking at individual parameters, the percent of patients with high BMI, BP, waist circumference, TG, FBS, and low HDL, all increased over time. Waist circumference showed the biggest increase, with 17.5% of patients having a high waist circumference at baseline and 50% at 24 months. Glycemic control contributed the least towards metabolic syndrome: HbA1C was within target in all patients and RG was high in only two patients at baseline with no change over time. In patients with early psychosis treated with antipsychotics, BMI and WC become abnormal before blood parameters, and, therefore, appear to be cost effective measures to predict the development of metabolic syndrome. Despite their young age, these patients are at high risk of developing metabolic syndrome and subsequent cardiovascular disease, warranting close and early follow-up.

No. 19

A Case of Neuroleptic Malignant Syndrome in the Context of Lithium Toxicity and Aripiprazole Use

Poster Presenter: Autumn Rose Schultz, M.D.
Co-Author: Carolyn Elizabeth Linek-Rajapaksha, M.D.

SUMMARY:

Mr. C, a 60-year-old Hispanic male with active psychiatric diagnoses of bipolar disorder type I and cannabis use disorder was admitted to the psychiatric unit for worsening depression and intermittent suicidal ideation in the context of medication non-compliance. On admission, his outpatient oral aripiprazole was reinitiated and later titrated. The patient continued to show little improvement in his psychomotor retardation, neglect of ADLs, and poor oral intake. He later endorsed psychotic symptoms and therefore, on hospital day 27, lithium was started and titrated for efficacy. Patient began to show some reduction in auditory and visual hallucinations and psychomotor retardation. However, on hospital day 49 the patient was found to have altered mental status (AMS), bilateral upper extremity tremors, disorientation, and worsening psychomotor retardation. Lithium level was found to be supratherapeutic and patient was transferred to the medical ward due to lithium toxicity; lithium administration was held. He continued to display AMS, and was also thought to be catatonic. He failed several lorazepam challenges and had a thorough negative medical workup. Lithium levels became subtherapeutic and lithium was restarted on hospital day 53. He subsequently developed worsened rigidity, autonomic instability

and fevers, leading to concern for neuroleptic malignant syndrome (NMS) despite repeated normal levels of CK. The patient's lithium and aripiprazole were discontinued on hospital day 55. Empiric NMS treatment with bromocriptine and dantrolene were subsequently initiated with resolution of fevers, rigidity, and autonomic derangements. As NMS is a psychiatric emergency with significant morbidity and mortality, understanding the etiology and risk factors as well as early detection are critical to patient outcome. In this poster, we discuss the potential for aripiprazole and lithium to lead to development of NMS.

No. 20

Quetiapine-Associated Neutropenia After Suicide Attempt by Overdose

Poster Presenter: Bartholt Bloomfield-Clagett, M.D.

SUMMARY:

Ms. G, a 78 year old Hispanic female with a past psychiatric history of schizophrenia, presented to the psychiatric consult service after overdose on multiple home medications, including quetiapine, clopidogrel, ranitidine, omeprazole, and acetaminophen. Her hospital course was complicated by severe neutropenia. On admission, her absolute neutrophil count (ANC) was 8000, which decreased to a nadir of 100 after two weeks in the hospital. Ms. G was given 2 doses of granulocyte colony stimulating factor with initial brisk ANC recovery followed by a rapid decline to neutropenic levels. Five weeks after admission, the patient's ANC recovered to greater than 1000. Quetiapine was restarted and the patient's ANC decreased again to less than 800. Quetiapine was discontinued and Ms. G's ANC recovered. While quetiapine associated neutropenia has been reported in the literature previously, this represents the first case of reported quetiapine-associated neutropenia after overdose. In this poster, we provide a review of the literature, including possible mechanisms of quetiapine induced neutropenia. We also discuss the possible benefit of ANC monitoring after antipsychotic overdose and the challenges of antipsychotic treatment for schizophrenia in those with antipsychotic induced neutropenia.

No. 21

Comparing the Effects of Bupropion and Escitalopram on Excessive Internet Game Play in Patients With Major Depressive Disorder

Poster Presenter: Beomwoo Nam

Co-Authors: Inki Sohn, Doug Hyun Han

SUMMARY:

Objective: Several studies have suggested the efficacy of bupropion and escitalopram on reducing the excessive internet game play. We hypothesized that both bupropion and escitalopram would be effective on reducing the severity of depressive symptoms and internet gaming disorder (IGD) symptoms in patients with both major depressive disorder (MDD) and IGD. However, the changes in brain connectivity between the default mode network (DMN) and the salience network were different between bupropion and escitalopram due to their different pharmacodynamics. Methods: This study was designed as a 12-week double blind prospective trial. Thirty patients were recruited for this research (15 bupropion group + 15 escitalopram group). To assess the differential functional connectivity (FC) between the hubs of the DMN and the salience network, we selected 12 regions from the automated anatomical labeling (AAL) in PickAtals software. Results: After drug treatment, the depressive symptoms and IGD symptoms in both groups were improved. Impulsivity and attention symptoms in the bupropion group were significantly decreased, compared to the escitalopram group. After treatment, FC within only the DMN in escitalopram decreased while FC between DMN and salience network in bupropion group decreased. Bupropion was associated with significantly decreased FC within the salience network and between the salience network and the DMN, compared to ecitalopram. Conclusions: Bupropion showed greater effects than escitalopram on reducing impulsivity and attention symptoms. Decreased brain connectivity between the salience network and the DMN appears to be associated with improved excessive IGD symptoms and impulsivity in MDD patients with IGD.

No. 22

Case Report: Hepatoxicity Linked to Chronic Use of Risperidone

Poster Presenter: Brandi Sauer

Co-Author: Caesa Nagpal, M.D.

SUMMARY:
Risperidone is an atypical antipsychotic that is widely used by many physicians in the treatment of Bipolar disorder and Schizophrenia. Use of Risperidone is associated with serum aminotransferase elevations which are mostly mild, transient and mostly occurring within the first 8 weeks of treatment. Some cases of acute liver injury have been reported to occur after months or years of treatment with Risperidone. We report one such case of a 38 year old male who presented with acute exacerbation of psychotic symptoms and was treated with Risperidone and developed increased serum aminotransferase and alkaline phosphatase. Method: (Case Report): Mr. Q, a 38 year old male with previous history of Schizophrenia was admitted to acute psychiatric facility after he was incompetent to stand trial. On admission, he was a poor historian and mostly gave illogical responses to most of the questions asked. The patient's mental status exam was significant for poor hygiene, malodorous, pressured speech, and disorganized thought process. He was seen responding to internal stimuli and frequently seen laughing inappropriately. He was started on Risperidone 4 mg/ day which was increased to 6 mg/ day after 3 days to have a better control of psychotic symptoms. This patient has been on Risperidone for the last 6 months. Routine labs were obtained which showed elevated serum aminotransferases (AST 200/ ALT 398), increased alkaline phosphatase and increased ammonia levels. Hepatitis panel, Serum iron, Serum ferritin, TIBC, Serum Ceruloplasmin, HIV, Vitamin B 12 and folate were negative for any abnormalities. Risperidone was discontinued and was alternately started on Paliperidone to help with psychosis. The serum aminotransferases came back to normal in 10 days after discontinuation of Risperidone. Discussion: Liver test abnormalities can occur up to 30 % of patients with long term use of Risperidone. It is mostly associated with elevated serum aminotransferases and in some rare cases can manifest as autoimmune hepatitis. It is imperative to remember that some psychopharmacological agents are also associated with risk of hepatoxicity. The type of hepatic lesion associated with antipsychotics can follow a primary hepatocellular pattern, therefore the main change in laboratory tests seem to be an elevation in aminotransferases. Hence it is important to get liver function tests when initiating treatment with atypical antipsychotics. Conclusion: Atypical antipsychotics like Risperidone can be associated with hepatoxicity and it is important to get liver function tests before and during treatment with atypical antipsychotics.

No. 23

Clozapine-Induced Myocarditis Following Bacterial Gastroenteritis: The Role of Infection in Clozapine-Mediated Cardiac Events

Poster Presenter: Christian Umfrid, M.D.
Co-Author: Julie B. Penzner, M.D.

SUMMARY:
Mr. G, a 39-year-old Orthodox Jewish man, was admitted to the inpatient psychiatric unit for initiation of clozapine for treatment-refractory schizoaffective disorder. Pre-treatment history and work-up demonstrated that he was medically stable and without contraindications to clozapine administration; he had well-managed hypertension, hyperlipidemia, and hypothyroidism, and had an unremarkable laboratory and cardiac evaluation, including baseline electrocardiogram and echocardiogram. Clozapine was initiated and titrated over the course of two weeks to a therapeutic dose with close monitoring of serum levels, and was well-tolerated by the patient. On day 14 of treatment, he developed constitutional symptoms of fatigue, malaise, accompanied over the following day by fever, nausea, explosive diarrhea and vomiting. His stool was positive for pathogenic enteroaggregative E. coli, indicative of infectious gastroenteritis, likely acquired from contaminated food brought onto the unit. Clozapine was held after symptom onset, and the patient was treated with broad-spectrum antibiotics given an evolving acute kidney injury, rising leukocytosis and fever. Despite improvement of gastrointestinal symptoms, he remained persistently febrile and had elevated cardiac enzymes. The patient's medical status rapidly declined and he required transfer to the intensive care unit, where he was intubated for acute respiratory failure, and was found to be in heart failure (ejection fraction 33% from baseline 62%). Cardiac biopsy confirmed myocarditis, with the likely

etiology being clozapine. This case is remarkable for clozapine-induced myocarditis with acute onset coinciding with a bacterial infection not typically associated with myocarditis. It further contributes to a small number of recently reported cases that have demonstrated an apparent temporal correlation between infection and clozapine-induced myocarditis during drug initiation and titration. Taken together, these cases have begun to suggest a possible synergistic relationship between the immune response to infectious pathogens and to clozapine in the precipitation of myocarditis. Given the complex immunomodulatory actions of clozapine, and the previously demonstrated rise in clozapine serum levels during infection, there exist multiple possible mechanisms of interaction and immunopotentiation that may contribute to the onset of myocarditis and warrant further investigation. Clinically, there is considerable overlap in the early systemic symptoms of infection and myocarditis, complicating recognition of the latter and the rapid discontinuation of clozapine, which is critical to optimizing patient outcome. In this poster, we discuss a hypothesized relationship between gastrointestinal infection and risk of myocarditis during clozapine treatment, potential mechanisms, and the need for vigilance in monitoring for adverse cardiac events throughout the course of infection while a patient is treated with clozapine.

No. 24

Can a PTSD Treatment Cause Physical Trauma? New-Onset Priapism Associated With Prazosin

Poster Presenter: David Roberto De Vela Nagarkatti-Gude, M.D., Ph.D.
Co-Author: Julie C. Anderson, M.D.

SUMMARY:

After engaging in psychotherapy for several months, a 37 year-old male agreed to his therapist's recommendation that he seek psychiatric consultation for adjunctive pharmacotherapy for PTSD. Having limited prior exposure to psychotropic medication, Mr. A preferred to limit his medications but was eager to attain better sleep and relief from trauma-related nightmares, so was willing to trial prazosin. After benefitting from gradual titration to 4mg prazosin over the course of several weeks, the veteran agreed to initiation of duloxetine as well. During the a 2-week period of co-treatment with duloxetine and prazosin (up to 8mg), Mr. A experienced 3 separate episodes of priapism. During the third episode of priapism, he presented to the Emergency Department and required emergent Urology consultation and treatment with irrigation/aspiration and phenylephrine. Prazosin was stopped, duloxetine was continued, and the patient continued without further episodes or priapism throughout the period of follow up. In this poster, we consider the variety of dosing paradigms that have been suggested, examine literature suggesting that anti-adrenergic medications may all carry a risk for the serious adverse effect of priapism, and discuss whether factors in medication dose and titration schedule may affect risk.

No. 25

Valproic Acid-Induced Necrotizing Pancreatitis: A Case Report and Literature Review

Poster Presenter: Deepika Sundararaj, M.D.
Co-Author: Walter Kilpatrick

SUMMARY:

Background: Acute pancreatitis is an established but poorly recognized side effect of treatment with valproic acid (VPA). Multiple case reports have been published analyzing the correlation between valproic acid and acute pancreatitis. Norgaard et al, performed a population-based case-control study in Denmark analyzing valproic acid as an independent risk factor for acute pancreatitis. However, necrotizing pancreatitis may be an even rarer side effect associated with valproic acid. Our literature review revealed only one case report describing it. Method: Initial lab work showed elevated lipase of 1000 with amylase of 708. As part of his sepsis work up, a CT abdomen was done which showed progressive pancreatitis with hypoenhancing areas in the body and tail suggesting necrosis. RUQ ultrasound was negative for gallstones or biliary dilatation. Results: Our case describes a 70-year-old male who presented after 48-hours of decreased PO intake and worsening abdominal pain. He decompensated and was admitted to the ICU with necrotizing pancreatitis. As he did not have risk factors for other more prevalent causes of pancreatitis, it was determined his etiology was related to his VPA treatment. Psychiatry was

consulted to recommend alternate medication management for patient's bipolar disorder. At our initial consult, we determined the patent had been treated with VPA for at least 10 years. He was started on gabapentin and lithium. The patient eventually stabilized and was transferred to the regular medicine floor. Unfortunately due to his deconditioning, he required PEG tube, but placement was made difficult due to his pathology. Ultimately he decompensated further and was made CMO and discharged to hospice care. Discussion: There have been multiple case reports of acute pancreatitis associated with VPA. Our literature review found only one case report discussing necrotizing pancreatitis associated with VPA use. To our knowledge, this is only the 2nd case of necrotizing pancreatitis reported secondary to VPA. Conclusion: Clinicians need to be aware of the potential long-term effects of treatment with VPA including rare sequelae of necrotizing pancreatitis in order to safely treat and monitor patients utilizing this medication.

No. 26

Application of Novel Approaches for the Design of a Venlafaxine Efficacy Prediction Model

Poster Presenter: Dekel Taliaz

SUMMARY:

To date, the gold standard used to determine patient response to antidepressant treatment is a depression score improvement of 50% or greater from the initial score. However, this definition does not take into account the 'time to response' different individuals exhibit, therefore not allowing for any differentiation between response rates. By taking into consideration both depression scores, and time to response, new features can be identified that may serve as predictors. In addition, not necessarily a single polymorphism, but rather combinations of genetic variations may impact the efficacy to antidepressants. We applied novel methods, to design a prediction model of efficacy to Venlafaxine treatment. First, we designed a response model for Venlafaxine treatment based on the raw data of the Sequence Treatment Alternatives to Relieve Depression (STAR*D) clinical trial. Second, we applied a genome- wide association approach for genetic feature selection, and then we developed a prediction model by applying machine learning algorithms to define combinations of parameters that predict response for Venlafaxine. The following results were obtained: Area Under the Curve of 0.8511, accuracy of 77.50%, sensitivity of 76.19% and specificity of 78.95%. The use of different response models and machine learning algorithms allowed us to design a highly accurate prediction model of response to Venlafaxine. Applying new models and new algorithmic methods on currently available large datasets can lead to novel findings which will advance our understanding of psychiatric disorders, and advance the design of accurate prediction models for psychiatric medications.

No. 27

Adverse Outcomes in Switching From Brand-Name to Generic Desvenlafaxine

Poster Presenter: Elena Jordan

Co-Authors: Jeannie D. Lochhead, M.D., Adam Mathew Basiago, Michele A. Nelson, M.D., Gerald Maguire

SUMMARY:

Major depressive disorder (MDD) is the world's leading cause of disability. It affects approximately 300 million people, and is a major risk factor for suicide with close to 800,000 deaths per year due to suicide. Selective serotonin reuptake inhibitors (SSRIs) are an effective treatment, but some patients do not reach remission with an SSRI. These patients may benefit from treatment with a selective norepinephrine reuptake inhibitors (SNRI), such as desvenlafaxine. We report a series of cases of patients who were in remission from MDD, but whose symptoms returned upon switching from brand name Pristiq to generic desvenlafaxine. This case series lends support to previous reports that some psychiatric patients are more successfully treated with a name brand medication, and raises the question of differences in generics and brand name medications. Multiple factors might explain this. Generic medications do not undergo the same stringent approval process that name brands require. There are not the large clinical trials needed by name-brands, and instead generics are approved based on bioequivalence studies. Bioequivalence is used to determine whether a brand name and

generic have the same efficacy and is determined by comparing the bioavailability, the area-under-the-curve on the drug concentration-time curve (AUC), as well as the maximum plasma concentration of the drug. Importantly, bioequivalence studies are generally performed on homogenous small groups of male, healthy volunteers and regulating agencies (FDA) require that a generic have only an 80% to 125% bioequivalence of its name brand counterpart This means there is room for generics to be potentially less effective than name brand equivalents, especially when certain subcategories are taken into account.

No. 28

A Case of Extrapyramidal Symptoms With the Co-Administration of Aripiprazole and Paroxetine

Poster Presenter: Eliza Buelt, M.D.

SUMMARY:

Background Aripiprazole is a second generation antipsychotic that is a partial agonist at dopamine D2 and serotonin 5-HT1A receptors and an antagonist at serotonin 5-HT2A receptors. It is metabolized to its active metabolite dehydroaripiprazole by cytochrome (CYP) 2D6 and CYP3A4. Paroxetine is a selective serotonin reuptake inhibitor and is a potent CYP2D6 inhibitor. Paroxetine has been shown to increase aripiprazole levels in a dose-dependent manner.1 This case illustrates side effects with the co-administration of these medications. Case A 24-year-old woman with a history of schizoaffective disorder, depressive type presented to the Emergency Department complaining of bilateral hand tremor, stiffness, drooling, and restlessness. Her symptoms developed a month after a hospitalization following a suicide attempt in the setting of paranoid psychosis. She was discharged on aripiprazole 15 mg BID and paroxetine 40 mg daily. On exam, she was noted to have mydriatic pupils and tremor in her bilateral hands, tongue, and lips. She maintained an uncomfortable appearing upright posture, had cogwheel rigidity in bilateral upper extremities, and decreased arm swing on her gait. Creatine phosphokinase and serum iron levels were checked due to concern for neuroleptic malignant syndrome and were normal. She was admitted to the inpatient psychiatric unit. Initially, paroxetine was decreased by half and aripiprazole was held. She was also started on benztropine 0.5 mg BID. Her cogwheel rigidity and tremor improved. Aripiprazole was restarted at a lower dose prior to discharge. Discussion Second generation antipsychotics medications and antidepressants are commonly co-prescribed in clinical practice. Even small doses of paroxetine have been shown to increase aripiprazole levels, and in this case the patient presented with extrapyramidal symptoms and akathisia. Clinicians should be aware of common drug-drug interactions and the potential for adverse effects. Additionally, although genetic testing was not performed in this case there is significant polymorphism in the CYP2D6 gene and other cytochromes which may influence proneness to adverse effects.2

No. 29

The Use of Long-Acting Injectable (LAI) Antipsychotics in Greece: Physicians' Beliefs and LAIs Use in Clinical Practice

Poster Presenter: Fotiadis Petros

SUMMARY:

Background/ Aim: Treatment goals of patients with schizophrenia have recently been raised – improvement and maintenance of functionality is nowadays in focus, in line with relapse prevention and long term symptom control. Long acting injectable antipsychotics (LAIs), especially early in the disease course at the time when functionality is most important to be preserved, is considered to be a valid treatment option, although very often underutilized. The aim of this observational questionnaire-based study was to evaluate the % of LAIs usage in clinical practice in Greece and investigate its correlation with physicians' beliefs. Methods: Questionnaires were distributed to psychiatrists in 3 PanHellenic Conferences in 2015-2016. One Way Analysis of Variance was used as the main statistical evaluation tool as well as paired samples t-test when comparisons were made between mean values. Results: This analysis included 98 questionnaires filled in by psychiatrists in Greece. 76,5% of the responding psychiatrists are practicing in the 2 big cities, Athens and Thessaloniki, 50% are practicing 6-15 years and 45% of them have only private practices. Preliminary data concerning the psychiatrists' perception showed that 50% of the

sample recommend a LAI after the first relapse and almost 1 out of 5 that their first LAI recommendation is only after the 2nd relapse. When evaluating the positive LAI features, it seems that psychiatrists in Greece are convinced that "LAIs are as effective as oral formulations" (4.6/5±0.6) whereas they do not believe that "LAIs are easy to titrate" (3.7/5±1.3). The benefits of LAIs that psychiatrists reported in the questionnaires in frequency order were: increased compliance, relapse prevention, treatment control, less adverse events and treatment coverage. The problems that were also reported were: increased duration of adverse events, cost, fear of needles, invasive method and difficulty of applying the injection. In a scale from 1-5 (1=no awareness, 5=excellent knowledge), the physicians' knowledge level concerning guidelines and switching/ titration methods is good (mean 3.9±0.7 and 4.0±0,8, respectively). Mean usage % of LAI was 28.4±22.6%, with only 16.7% of the sample using LAIs ?50% in their practice. Multiple linear regression analysis (stepwise selection) indicates that the % of LAIs use in real life clinical practice is statistically significant related to the physicians' practice since psychiatrists with only private practices report lower use of LAIs (p=0.001) and psychiatrists practicing in Thessaloniki report a higher use of LAIs (p=0.03). Conclusion: Despite the rather good knowledge and positive perception towards the clinical benefits of LAIs that the psychiatrists in Greece have, it seems that the use of LAIs is still low in Greece. Problems that clinicians face act as a barrier for increased usage in clinical practice and should be adequately addressed in the near future.

No. 30

Effects of Adjunctive Raloxifene on Symptom Severity in Women With Schizophrenia: A Meta-Analysis

Poster Presenter: Rachel Steere, D.O.
Co-Authors: Vedrana Hodzic, M.D., Andrea Hiyam Naaum, M.D.

SUMMARY:
Context: Growing evidence suggests that estrogen reduces the severity of positive and negative symptoms of schizophrenia. There is an increasing shift to investigating selective estrogen receptor modulators (Raloxifene) as they provide the protective effects of estrogen without the adverse effects on reproductive organs. Objective: To assess the effects of adjunctive raloxifene on symptom severity as measured by the PANSS when compared to antipsychotics alone in the treatment of adult women with schizophrenia or schizoaffective disorder. Data Sources: Electronic databases (PubMed, PsychINFO) were searched for randomized control trials published in English from January 1990 to October 2016. Search terms included: selective estrogen receptor modulator, raloxifene, schizophrenia, schizoaffective disorder, raloxifene hydrochloride. Study Selection: Eligibility criteria were RCTs of adjunctive raloxifene in the treatment of women with schizophrenia or schizoaffective disorder stabilized on antipsychotic medications. Studies were restricted to adults and had to include PANSS scores at intake and completion of treatment. Thirty-seven articles were found and 7 full text articles were assessed for eligibility, resulting in 3 studies for quantitative meta-analysis. Data Extraction: Two authors independently extracted data. Effect sizes were represented by standardized mean differences (SMD). Results: A total of 149 participants across 3 studies were included in the analysis, with 133 participants completing the studies. Compared to antipsychotics alone, adjunctive raloxifene showed improvement in the total PANSS score (SMD 1.194, CI 0.844, 1.545, p=0.000), positive PANSS score (SMD 1.222, CI 0.869, 1.574, p= 0.000), negative PANSS score (SMD 0.992, CI 0.651, 1.334, p= 0.000), and general psychopathology PANSS score (SMD 1.137, CI 0.789, 1.485, p= 0.000). Conclusions: This meta-analysis demonstrates that total and all PANSS sub-scores showed a significant response to treatment with adjunctive raloxifene when compared to antipsychotics alone in women with schizophrenia or schizoaffective disorder. These findings are promising as negative symptoms pose a significant treatment challenge.

No. 31

A Review of the Effects of Adjunctive 5-HT3 Antagonists on Symptom Severity in Adults With Schizophrenia

Poster Presenter: Andrea Hiyam Naaum, M.D.
Co-Authors: Rachel Steere, D.O., Vedrana Hodzic, M.D.

SUMMARY:

Schizophrenia is a complex neuropsychiatric disorder that can be profoundly debilitating, ranking in the top 10 causes of long-term disability worldwide and affecting up to 0.7% of the population during their lifetime. Symptomology is classified in 3 main clusters: positive symptoms, negative symptoms and cognitive deficits. The heterogeneity of symptoms signifies that there may be a need to identify differing etiologies for different disease with the syndrome. There are numerous neurotransmitter systems implicated in schizophrenia (dopaminergic, serotonergic, glutamatergic), which adds to the difficulty in effectively treating the disorder. The primary treatment for schizophrenia is antipsychotic medications, predominantly targeting the dopaminergic system. Antipsychotics primarily target positive symptoms, and have reduced efficacy on cognitive and negative symptoms. This has led to exploration of potential adjunctive treatments to extend the current therapeutic benefits of antipsychotic drugs. The finding that drugs with serotonergic antagonist properties (such as clozapine, quetiapine and olanzapine) are efficacious in treating schizophrenia, as well as the emerging role of for the serotonergic system in the pathogenesis of schizophrenia, have led to the investigation of 5-HT3 antagonists as treatments. Some studies have suggested that these antagonists may reduce negative symptoms and improve cognition in patients with schizophrenia. This literature review summarizes the findings to-date on the effects adjunctive treatment with 5-HT3 antagonists has on symptom severity and cognition when compared to antipsychotics in the treatment of schizophrenia. These findings may inform future prescribing practices for patients with schizophrenia.

No. 32

ADHD Is Associated With Migraine: A Systematic Review and Meta-Analysis

Poster Presenter: Haitham Salem, M.D., Ph.D.

SUMMARY:

Background: An association between primary headaches and attention deficit hyperactivity disorder (ADHD) has long been suggested. Moreover, headache is regarded as a common side effect of stimulants, the most effective treatment for ADHD. So far, no systematic review has evaluated the potential association between ADHD and headache. Method: We performed a systematic review of the literature and a meta-analysis of all reported studies on ADHD and primary headaches. Results: Our analysis showed a positive association between ADHD and migraine (OR: 1.322, 95% CI: 1.018-1717, p-value: 0.036), but not to Tension Type Headache. Conclusion: There is a significant association between migraine and ADHD. The mechanisms underlying this association remain to be elucidated, warranting further studies. Keywords: ADHD, Headache, Migraine, TTH, Meta-analysis, Stimulants

No. 33

Psychosis in a Patient With Retinitis Pigmentosa: Beware of D4 Receptor Blockade!

Poster Presenter: Haitham Salem, M.D., Ph.D.

SUMMARY:

Background: Retinitis Pigmentosa is a rare inherited degenerative eye disease affecting the retinal pigment epithelium (RPE), in which mutation of rhodopsin leads to severe visual impairment, and legal blindness by age 40. While Dopamine 2 (D2) receptor blockade remains the sine qua non of antipsychotic activity, the D2 family also includes the D3 and D4 receptors. Most atypical antipsychotics have high affinity for the D4 receptor. The D4 receptors are abundant within the rods of the retina and dopamine release is the primary feedback mechanism preventing retinal degeneration by the unopposed action of melatonin. With these issues in mind, the current case discusses the selection of an antipsychotic medication in the context of retinitis pigmentosa. Case Report: A 50-year-old female with Schizophrenia and Retinitis Pigmentosa was admitted to an inpatient unit at a free standing academic psychiatric hospital in Houston, TX for an acute psychotic exacerbation with agitation and persecutory delusions. She initially refused to take any antipsychotic medication due to her belief that the medication would further exacerbate her legally blind condition. Since she remained very psychotic, a petition for forced medication administration was filed and subsequently approved by the mental health court. Course and treatment rationale: Choice

of a specific antipsychotic medication was complicated by the patient's Retinitis Pigmentosa as well as her history of non-compliance to medication on an outpatient basis. Quetiapine and Abilify have a relatively low affinity for the D4 receptor, but no IM and/or depot formulations were available at the inpatient facility. Haloperidol was subsequently selected based on its similar D4 affinity to the remaining atypical antipsychotic medication, and also since it was available in an IM and depot formulation. Pt. initially was administered IM Haldol since she refused oral Haldol, but she eventually was compliant to oral Haldol with eventual reduction in daily dose to 5mg/d with eventual treatment response and good tolerability including no change in visual acuity. Conclusion and learning points: The treatment of psychosis in patients with Retinitis Pigmentosa is not only challenging, but requires consideration of the potential D4 receptor effects associated with an antipsychotic medication. Otherwise, further retinal damage may occur. Since there is little data available concerning this rare but important issue, this case report provides some guidelines for psychosis management in such patients. Keywords: Retinitis pigmentosa, Psychosis, Antipsychotics, Dopamine receptors, Melatonin

No. 34

Methylphenidate-Induced Obsessive Thoughts in a Patient With ADHD

Poster Presenter: Bharath Kumar Reddy Nandimandalam, M.D.
Co-Author: Balkozar Seif Eldin Adam, M.D.

SUMMARY:

Mr.X is a 10 yr old WM, diagnosed with ADHD at age 6yrs, presented to the hospital with aggressive behaviors including hitting, biting his mom and grand mom, running away from home. He was prescribed Concerta 18mg qam for ADHD. He was also tried on Adderall, Focalin, Vyvanse, Tenex, Strattera that were ineffective. He was tried on Concerta 36mg qam when he was 7yrs old and it helped some but was discontinued as it caused stomach upset. Over the years, his symptoms kept on worsening, and he continued to have poor grades in the school. In the hospital, patient continued to be fidgety, hyperactive, impulsive, would frequently run about or leave his place in situations where he was expected to be seated and would frequently interrupt others during their conversation, trying to bite and hit other peers, poor focus, easily distractible, very talkative. Concerta was increased to 27 mg qam which he tolerated, but still continued to be very hyperactive, impulsive, intrusive. He was then started on Ritalin 5 mg tid to treat his ADHD symptoms. A day later, patient had developed obsessive with doubts, asks the same doubt/questions to different staff members multiple times through out the day though he was answered. Ritalin and concerta were discontinued and his obsessions have resolved completely in 4-5 days. Methylphenidate have been used extensively for the management of ADHD. Evidence suggests that stimulants are more effective than placebo. The most common side effects associated with methylphenidate are headache, loss of appetite, weight loss, insomnia, irritability, agitation. Obsessive symptoms as a side effect of methylphenidate have rarely been reported and there are only few case reports describing these in children and adolescents. In this case presentation, we would like to discuss a patient with ADHD and methylphenidate induced obsessive symptoms and review available literature on methylphenidate induced Obsessive Compulsive symptoms.

No. 35

Autism Spectrum Disorder and Fetishism: Case Report and Review of Literature

Poster Presenter: Bharath Kumar Reddy Nandimandalam, M.D.
Co-Authors: Katherine Marie Edwards, M.D., Chad Robert Elder, D.O., Garima Singh, M.D.

SUMMARY:

Mr. X is a 17-year-old Caucasian male with a past history of anxiety disorder, learning disorder, and physical and emotional abuse who presented to the Autism Clinic given concern for behavioral and emotional rigidity, impaired social and communication skills, restrictive interests, sensitivity to fabric and sounds, and significant associated anxiety. His parents reported repetitive behaviors and the patient was observed to exhibit underproductive speech with abnormal prosody during mental status examination. After his initial evaluation, a trial of Zoloft 25 mg was initiated to

treat his anxiety, with additional recommendation to continue outpatient psychotherapy. During subsequent follow up visits, his parents raised additional concern regarding behaviors of a more sexual nature. Since the age of 13, the patient had been interested in feminine clothes and products, and had been found to hide his mother's underwear in his room and masturbate into them multiple times. The patient had also dressed himself as a female, having noted that this felt "good and natural", though reporting that it was "wrong" after having been "caught" by his parents. The patient had not been bothered by these thoughts, though ultimately did not want to have them, and denied wanting to be a female. Overall, his thoughts appeared ruminative in nature and were associated with some impulsivity. Given consideration of his overall presentation, fetishistic disorder was considered as a possible diagnosis. Inappropriate sexual behaviors in individuals with autism spectrum disorder (ASD) could result in significant distress for themselves and their families, and could disrupt their social development overall. There is limited research available that discusses fetishism in individuals with ASD, and further studies would be important, especially given that these patients already struggle with identifying social norms and engaging in social interactions. Having a comorbid paraphilias that overlaps with the symptoms of ASD makes treatment and management challenging. In this case presentation, we will discuss a patient with features of both ASD and fetishistic disorder and review available literature regarding the treatment and management of patients with these comorbidities.

No. 36

Contributing Factors for the Development of Antisocial Personality Traits: A Case Report

Poster Presenter: Ayesha Shaheryar, M.B.B.S.
Co-Authors: Naveed Butt, Asghar Hossain, M.D.

SUMMARY:

Introduction: Personality development is the continuous pattern of thoughts, feelings and behaviors that distinguish one individual from another. Per Freud, the adult personality emerges as a composite of early childhood experiences, based on how these experiences are consciously and unconsciously processed within human developmental stages, and how these experiences shape the personality. In this abstract, we focus on different contributing factors on the development of antisocial personality traits. Case report: We presented a case of 11-year-old Serbian male, with no prior psychiatric hospitalizations, who presented to emergency department secondary to encouraging an online acquaintance on snapchat to commit homicidal acts and mass shootings. The patient showed deep interest in playing online criminal/violent video games and events of the Columbine shooting. The patient was raised by his mother alone. There is a history of bullying. Patient is in gifted/talented classes. Discussion: Personality disorders affect 10-15% of US population and amongst those the prevalence of antisocial personality disorder is around 0.7-4.1%. Individuals with antisocial personality trait display a persistent pattern of disregard for and violation of the rights of others and the rules of society. There are many factors which can contribute to the development of antisocial personality trait. There are hereditary factors which can play a part but social and family environment are the major influence. It has been studied that child abuse, divorce, single parent, unstable family dynamics and alcoholism in one of the parents can lead to antisocial behavior in children. Similarly, children who are adopted or living in foster care are more prone to develop antisocial personality. Home environment without any discipline and supervision can be a major contributory factor. Impact of playing violent video games is another factor which needs a wide variety of research. In the past two decades, several correlational studies involving adolescents and young adults have found a small but significant relation between playing violent video games and aggression. It has been studied that 97% of adolescents aged 12 to 17 years play computer or portable video games but the alarming fact is almost half of the adolescent population plays violent video games. Children especially boys who are involved in watching crime movies or playing violent video games will find some tough warriors or heroes from games who frequently use aggression to solve problems, rarely being punished and shows no remorse for their aggressive behaviors. In developing their identity, adolescent boys may take ideals out of

these characters and use these ideals to guide their own behavior. Conclusion: There is a need of extensive research to establish the contributory factors in the development of antisocial personality traits especially the role of social media, video games and crime movies.

No. 37

Longitudinal Change in Health Status After the Sewol Ferry Accident Among Bereaved Parents

Poster Presenter: Sangeun Yang

SUMMARY:

Objective : The present study had examined the psychiatric symptoms and physical health consequences for the bereaved parents of the high school students who died in the 2014 Sewol ferry accident. Methods : Forty bereaved parents participated in the study. The authors administered self-report questionnaires about the parents' health behaviors and psychiatric symptoms. The authors also conducted laboratory tests to assess the parents' physical health at 18 and 30 months after the accident. Univariate descriptive statistics were performed to report the prevalence and severity of psychiatric symptoms and health-related behaviors. Paired t-test and mcnemar test were performed to compare the 18-and 30-month findings. Correlation analysis between psychiatric symptoms and laboratory findings were performed to find a relationship between the two variables. Results : At 30 months after the accident, most of the bereaved parents still appeared to suffer from complicated grief (97.5%), post traumatic stress disorder (80%), insomnia (77.5%) and severe depression (62.5%) based on the scores on the Inventory of Complicated Grief (ICG), the PTSD Check List-5 (PCL-5) ,the Insomnia Severity Index (ISI) and the Patient Health Questionnaire-9 (PHQ-9). One quarter, 25%, of the bereaved parents reported high-risk drinking, and 47.5% reported increased drinking amount and frequency after the accident. In objective laboratory results, 55% of the bereaved parents were obese as defined by body mass index ≥25. The parents' mean low-density lipoprotein shows a significant increase over time (118.5 mg/ dL at 18 months. vs. 132.5 mg/dL at 30 months. paired t-test t=-4.061, p?0.001). Total cholesterol and low-density lipoprotein at 30 months after the accident were in clinically borderline high range. In correlation analysis, triglyceride was positively correlated with ISI. Conclusion : The loss of children in the Sewol ferry accident, a disaster caused by human error, continued to have considerable impact on the victims' parents' mental and physical health 18 and 30 months after the accident. A longitudinal study following the parents' physical health would be necessary to investigate the long-term effects of this traumatic experience on physical health.

No. 38

Do Parents and Children Report the Same Psychiatric Symptoms? Comparison of *DSM-5* Level 1 Self and Parent-Reported Cross Cutting Symptom Measures

Poster Presenter: Mark Peterson

SUMMARY:

Background DSM-5 Level 1 cross-cutting surveys were introduced in 2013 under "emerging measures" in Section III of DSM-5. They were designed to monitor responses to treatment over time [1]. For the child and adolescent population, special surveys were designed to assess symptoms based on the guardian's perception in addition to that of the patient's self-report. Previous research has shown disagreement between parent-child surveys [2,3]. This study was conducted to assess interrater agreement between parent and child using this measure. Methods Patients, aged 11-17, and their guardians were given DSM-5 Level 1 cross-cutting surveys before their appointments at a university child and adolescent psychiatry clinic. Psychiatric diagnoses were obtained through chart review. Each of the 25 questions was tested for interrater agreement. Results 70 pairs completed the survey. Interrater agreement showed wide variation with kappa values ranging from -.04 to .83. Two thirds of the questions had kappa values less than .4 indicating low agreement levels. Six questions showed good agreement with kappa levels at .4- . 75. Only three questions showed excellent agreement with kappa values above .75. Symptom categories with the lowest agreement were inattention, anger, irritability, and psychosis. The most common diagnoses were ADHD (n=53), MDD (n=25), and GAD (n=24). No subjects carried a diagnosis of any psychotic disorder. Two questions

addressed suicidality. The question asking if suicide has been attempted had very high agreement. The question asking if there have been thoughts of suicide (child survey) or talk of suicide (parent survey) had very low agreement. It was answered positively more often by the guardian (n=5) than by the child (n=2). The highest degree of agreement was in questions addressing substance abuse. Discussion This study found frequent disagreement between parent and child. This emphasizes the importance of gathering information about each domain from both sources when evaluating adolescents. Using the Level-1 screen allows clinicians to gather this range of information in an efficient manner.

No. 39

Validation of the Mexican Versión of the Yale Food Addiction Scale for Children: The Identification of Psychopathology in a Non-Clinical Sample

Poster Presenter: Martha Paola Corral Frias
Co-Authors: Alfredo Bernardo Cuellar-Barboza, Antonio J. Lopez

SUMMARY:
Background: Food addiction is positively associated with obesity and mental pathologies; therefore it is considered a specific risk mechanism for obesity. Understanding obesity-related phenomena such as food addiction is therefore critical in our population, especially in the child population that is exposed for a longer time to the harmful effects of these entities. At the same time, we propose to evaluate the prevalence of mental health problems in children with addiction to food; to determine its clinical impact more clearly and thus establish a clinical phenotype Methods: To the pediatric patients that are positive on the YFAS-C scale applied by the study Validation of the Yale Scale for Food Addiction for Children YFAS-C in Mexican children and adolescents were contacted to be interviewed. The study consists of a single visit where consent and informed consent will be made. The structured interview MINI International Neuropsychiatric Interview (MINI KID) was conducted in its Spanish version (Sheehan et al., 2000). Results: Study in phase of recruitment of patients. Five of thirty-eight patients were recruited, of whom 80 percent were women, 100 percent were in high school, with a mean age of 15.6, 40 percent resulted with alteration in weight (1 with overweight and 1 with obesity). MINI KIDS was applied, 60 percent of the patients recruited were positive for a mental pathology. Conclusion: In this study we report, there is a high prevalence of mental pathology and food addiction.

No. 40

Behavioral Assistance Response Team Effectively Provides De-Escalation and Aggression Management at a Large Tertiary Children's Hospital

Poster Presenter: Daniel Nicoli, D.O.
Co-Authors: Anne Penner, Beau Carubia

SUMMARY:
Background: In pediatric inpatient settings, staff often feel uncomfortable managing youth with complex psychiatric comorbidities who may be at increased risk of agitation, potentially requiring de-escalation or seclusion and restraint (S&R). S&R is a rare occurrence on medical floors, and staff often have insufficient experience and training (Zicko et al., 2017). To address this, solutions have been proposed including additional nursing education, increased nursing exposure to psychiatric patients, implementation of psychiatric consultation-liaison services, and more recently, rapid response teams that specialize in behavioral emergencies (Pestka et al., 2012). There is very limited guidance in the literature regarding the effectiveness of these teams and no evidence of best practices for managing agitated children in the medical setting. Our institution, a tertiary children's hospital with over 400 beds, instituted a Behavioral Assistance Response Team (BART) in 2010. Methods: The BART consists of a multidisciplinary team that is designed to intervene when there is the potential of immediate harm due to a patient's behavior and additional resources are immediately needed. When called, the team, directed by a lead mental health counselor, works collaboratively to assist in de-escalation and determine the patient's immediate needs. Afterwards, the team debriefs with staff and discusses further recommendations such as additional supervision and formal psychiatric consultation. The bedside nurse records data including the reason for code, interventions, and patient response within the EMR. Results: From 2015-2016, there were a total of 68 code BARTs. The

most common reason was an aggressive or agitated patient (57%), followed by danger to self (15%), assaultive (9%), other (9%), and no reason listed (3%). In total, only 14 patients required restraints. Restraint was required in only 33% of the assaultive, 21% of the aggressive, 20% of the out of control, and 10% of the danger to self patients. Of those who were restrained, 29% became further agitated, 43% had no change in behavior, and 29% became calm and cooperative. Conclusion: This innovative service integrates pediatric medical and mental health providers and staff to better serve agitated patients. This model describes a frequently used and feasible service, that could be replicated more broadly. Our data demonstrate that even assaultive patients are often managed with less restrictive interventions. This may be due to the specific mental health experience and verbal de-escalation training possessed by the team members. And, in instances when more restrictive means are required, trained mental health staff are present to facilitate a safe process. In addition, there are potential benefits that could be further studied such as decreased instances of S&R and injuries, which make this model a promising way for hospitals to cut costs while also improving patient outcomes.

No. 41

A Study on the Relationship Between Inpatient Adolescents' Ratings of Object Relations and Psychopathology

Poster Presenter: Michael Esang, MB.Ch.B., M.P.H.
Co-Author: Gregory Haggerty, Ph.D.

SUMMARY:

The current study looks to investigate the relationship between inpatient adolescents' ratings of object relations and psychopathology. The study included 66 adolescents who were hospitalized on an acute inpatient unit. The patients' group and individual psychotherapists completed ratings on the patients' object relations using the Social Cognition and Object Relations Scale-Global (SCORS-G, Stein et al. 2011) and also completed ratings of prototypes of 5 common disorders (Guamaccia, Bradley, Westen, unpublished manuscript) seen with adolescent inpatients (ADHD, Conduct Disorder, Major Depressive Disorder, Generalized Anxiety Disorder, and Post-Traumatic Stress Disorder). The ratings were completed at the patients' discharge from the unit and raters were blind to each others' rating. The findings show that the SCORS-G ratings show negative correlations with the prototype ratings of the 5 disorders. The only exception was a slight positive correlation with all the items of the SCORS-G and the Major Depressive Disorder prototype. Both clinician-rated measures showed good inter-rater reliability. Clinical implications are discussed.

No. 42

Is This Premorbid Schizophrenia or Major Depression: A Case Report?

Poster Presenter: Ayesha Shaheryar, M.B.B.S.
Co-Authors: Naveed Butt, Asghar Hossain, M.D.

SUMMARY:

Schizophrenia, whilst markedly interfering with individuals functioning is characterized by positive and negative symptoms, mood symptoms and as well as neurocognitive deficits. Identifying Schizophrenia in its early stage is a crucial step as some of the symptoms commonly observed in the initial stages have a close overlap to symptoms of Major Depression Disorder. We presented a case of 16-year-old male without any history of previous hospitalizations and psychiatric illness, presented to the hospital due to increased agitation and aggression towards his mother. Triggers included his worsening social withdrawal and isolation, and deterioration of ability to care for his ADLs such as showering and grooming. The patient exhibited negative symptoms, such as blunted affect, poverty of speech and thought, apathy, anhedonia and lack of social desire or interest. He had become progressively socially withdrawn over the last few years. His diagnosis was difficult to establish as the symptoms may be due to major depression or premorbid state of schizophrenia. Depression is one of the most prevalent among the psychiatric illnesses as 7.6% of American aged 12 and older suffered from major depression (during 2009 to 2012) but it has a much better prognosis with appropriate treatment with 70-80% of patients achieve a significant reduction in the symptoms. Some of the symptoms of major depression like anhedonia, depressed mood, social isolation, lack of sleep and lack of motivation are hard to distinguish from the prodromal phase of schizophrenia.

Evidence from multiple researches suggested that the prodromal period which can last from weeks to several years. It is suggested that the earliest symptoms that individual experiences are the negative symptoms like anhedonia, depression, anxiety and social isolation with some impairment in daily functioning. The basic symptoms which are considered as significant include impaired bodily sensations; subjective experiences of thought, language, perception and motor disturbances; impaired tolerance to stress and disorders of emotion, energy, thought and memory. These early symptoms can affect social and cognitive development. Later, one can develop positive symptoms of brief or moderate intensity. During this prodromal phase, there is a high risk of comorbid disorders. In order to diagnose schizophrenia in the early stage, different assessment scales can be used. One such scale is known as CAARMS scale (Comprehensive Assessment if At- Risk Mental States), which is based on the intensity, frequency and duration of emerging positive symptoms, as well as decline in functioning. It is important to diagnose the patient in this early stage as early intervention can lead to improvement in prognosis of patients with schizophrenia.

No. 43

The Effects of Prenatal Exposure to Marijuana on Early Childhood Development: A Systematic Review

Poster Presenter: Dhurga Krishnamoorthy, M.B.B.S.

SUMMARY:

Aim: To assess the effect of prenatal marijuana exposure (PME) on the newborn, infant and early childhood development. Methods: A systematic review was conducted in the electronic database from 1996 to 2017 for the effects of PME and their fetal and early childhood outcomes. Results: Seven percent of pregnant women self-reported using marijuana in the last year, while 16% of them reported near-daily use. Marijuana use has been reported to: a) interfere with normal placentation leading to miscarriage, preeclampsia and preterm labor through imbalance in Cannabinoid receptor type 1 (CBR1) stimulation; b) cause reduction of fetal growth and head circumference due to increased pulsatility and resistance of uterine artery; c) be associated with impaired memory function, decreased verbal scores, increased aggression and hyperactivity, impaired abstract and visual reasoning; and d) cause alteration in sleep patterns. Finally, there is no consensus regarding the effects of marijuana through breastfeeding exposure and no postpartum withdrawal effects in the newborn were reported. Research on the effects of PME on offspring has been limited by several confounding factors including self-reporting bias, concomitant use of other illicit drugs and psychosocial factors. Conclusion: Overall, PME may lead to negative consequences on the developing offspring. Public health messages to health care providers and pregnant women regarding the harmfulness of PME should become a high priority. Further research is needed to reinforce the existing data and examine additional potential negative effects on the developing child. Keywords: Marijuana; cannabis; pregnancy; outcomes; prenatal; fetal; perinatal; neonatal; early childhood.

No. 44

Gender Fluidity: An Identity Issue or a Relationship Issue?

Poster Presenter: Dhurga Krishnamoorthy, M.B.B.S.

SUMMARY:

This is a case study about a 17 years old adolescent female by birth with h/o bipolar 1 disorder MRE mixed with psychotic features, parent child relationship conflict and sexual trauma, who switches between male and female. Initially she was thought to have been gender fluid but longitudinal follow up explains that her gender identity shifts in relation to the people she hangs up with. It explains how poor object relations and interpersonal relationship with others influenced her gender fluidity.

No. 45

Rizatriptan-Induced Mania-Like Symptom in an Eight-Year-Old Girl

Poster Presenter: Hitekshya Nepal, M.D.

SUMMARY:

Bipolar disorder in children is difficult to diagnose because of considerable overlap of symptoms with co-morbid disorders. Triptans are FDA approved migraine abortive medications. We present an 8

year old girl referred by her pediatrician for rapidly changing behaviors following 3 days use of Rizatriptan for migraine. According to the informants, she started having headaches for two weeks in the evening, for 4-5 hours, exaggerated by sound and light. She was initially treated with analgesics with minimal relief. Patient was started on Rizatriptan 10mg daily for migraine. Three days later, she started having decreased sleep (total duration 3-4 hours with early awakening). Parents began to notice she started being hyperactive and irritable through the day. Her sleep decreased further to about 2-3 hrs total. Patient was found to have increased energy, performing goal directed tasks like cleaning her room and making colorful crafts. She was playing with her dog imagining it to be a tiger and she being a hunter. The behaviors then started getting aggressive, she threw utensils from the kitchen stating that she would get better ones. She was hyper talkative and her speech was rapid. She was talking with alot of gestures, making faces and moving her hands in air. She started getting obsessed with applying makeup most of the time. She was found texting her male peers and writing letters to them expressing her sexual fantasies. There was no history suggestive of any medical condition. There were no other psychiatric symptoms. History was negative for abuse and any substance exposure. Family history was significant for anxiety in mother and bipolar disorder on treatment with Lithium in both paternal and maternal grandmothers. Vitals including physical examination was within normal limits. Mental status examination showed a child per stated age constantly moving in the room with significant fidgety. Speech was pressured with increased rate and rhythm, loud. Mood was irritable and affect was animated. Grandiose delusions were present. No auditory or visual hallucination seen. The complete blood count, chemistries and thyroid function was within range. CT scan of head and an electroencephalogram revealed no abnormalities. The patient was started on Valproic acid 250 mg twice daily with Risperidone 1 mg. She developed some dystonia, the Risperidone was stopped, and was treated with diphenhydramine. Patient then showed some improvement in her symptoms. The irritable mood with pressured speech and impulsive behaviors continued for which she was started on Aripiprazole. Patient had complete resolution of symptoms on this combination over 6 weeks. With this case, we highlight that mania can be induced in children with triptans which are commonly used in treatment of migraine. Clinicians should arrange for close follow up for any patients taking triptans and should be vigilant to recognize any change in behavior induced by triptans to provide prompt treatment.

No. 46

Copycat Suicide Attempt Following Netflix Show "13 Reasons Why": A Case Report and Literature Review

Poster Presenter: Muhammad Zeshan, M.D.
Co-Authors: Pankaj Manocha, M.D., Muhammad Hassan Majeed, M.D., Sadiq Naveed, M.D., Ahmed Waqas

SUMMARY:
Objectives: The impact of media industry on the acts of suicide has been an area of interest for clinicians. Our aim is to investigate the copycat effect of the portrayal of suicide attempt in the media industry. We also explored the preventive effect of these shows on such imitative acts. We present the case history of an adolescent with the history of bullying who self-identified herself like a character "Hannah" in Netflix show "13 Reasons Why". She engaged in self-harm to ease her emotional pain by mimicking herself as a Hannah in the show. The patient reported that as the season progressed, "Hannah's" parent went through suffering and pain after her death. The patient did not want her family to face pain and suffering which kept her from self-harm. Methods: We searched PubMed database for relevant articles, using terms "copycat suicide attempt" or "imitation suicide attempt", and "media" in the last 5 years. Results: Our literature review shows that both fictional and nonfictional suicide stories have a real effect on the minds of adolescents. This "suicide contagion" is frequently observed in high schools and college campuses and is a part of broader effect often known as behavioral contagion or media contagion. The impressionable nature of adolescents puts them at a higher risk of suicide, by using the similar methods of suicide shown in media, when they watch a portrayal of suicide in a fictional show. It is also evident that

news media has a stronger influence on the minds when compared to fictional formats. The burden of the portrayal of suicide in the fictional and non-fictional suicide stories depends on the news directors and journalists. At times, they glamorize the suicide rather presenting it in a way that encourages help-seeking behavior and prevents imitation. Conclusions: Mental health experts have a role in educating the media to deglamorizing the act of suicide or reporting a suicide in order to dampen the media contagion effect which can reduce the imitative behavior.

No. 47

Electroconvulsive Therapy (ECT) in Children With Autism: A Systematic Review of the ECT Practice

Poster Presenter: Raul Johan Poulsen, M.D.
Lead Author: Samantha B. Saltz, M.D.
Co-Authors: Stuart Sacks, Julie Furst, M.D., Heather Barkin, Judith Regan

SUMMARY:

Objective: Electroconvulsive therapy (ECT) has been used for refractory psychiatric conditions in the U.S. since 1938. Despite this, few practitioners are comfortable recommending ECT for minors. Ghazzudin et al. reported that, 75% of surveyed child and adolescents psychiatrists felt uncomfortable providing a 2nd opinion for ECT in children. Pediatric ECT is an emerging field that benefits from scientific query. We performed a systematic review to evaluate available information on ECT in children with autism. Methods: With a research librarian, three databases were included (Cochrane, Embase, and Pubmed) in our systematic review. Cases in languages other than English, as well as those with persons over the age of 18 were excluded from analysis. 22 cases met inclusion criteria. Results: Children with autism who received ECT were between the ages of 8 and 17 with a mean of 14.86 years. 73% of included cases were male. Most children had a comorbid diagnosis of Catatonia (82%), Mood Disorder with Psychosis (14%), Bipolar Disorder (9%), Major Depressive Disorder (5%), Schizophrenia (5%) or Tourette's (5%). Children had been treated with several psychotropic and neurotropic medications with minimal effect including: 1st and 2nd generation antipsychotics (8/19=42.1%, 12/19=63.2%, respectively), SSRIs (13/21=61.9%), Monoamine Oxidase Inhibitors (1/21=4.8%), Tricyclic Antidepressants (3/21=14.3%), benzodiazepines (12/20=60%), stimulants (5/21=23.8%) and mood stabilizer/anticonvulsants (12/20=60%) (Total > 100% secondary to polypharmacy). Symptoms were not well controlled; therefore patients were offered ECT. Both Bilateral (19 reported cases) and Unilateral (3 reported cases) ECT were used. Children received 10 to 156 ECT treatments. Induction agents included propofol (9% total cases), methohexital (55% total cases), 36% unreported. Neuromuscular blockers (NMB) included succinylcholine (59% total cases), 41% unreported. Anticholinergic agents included glycopyrrolate (32% total cases), 68% unreported. ECT-induced seizures lasted from 26-206 seconds as measured by EEG. ECT was overall well tolerated with rare side effects including: fatigue, hunger, and postemergent agitation. All children benefited from ECT. 11 cases reported data on school attendance, and 11/11 attended school after ECT. Conclusion: Many children with chronic mental illness do not improve with oral medications and respond to ECT. We believe that ECT may be an underutilized treatment in minors. Education must be provided to practitioners and to families who are affected.

No. 48

Psychiatric Re-Admissions for Inpatient Stabilization, Evaluation on Youth: A Review of the Literature

Poster Presenter: Raul Johan Poulsen, M.D.
Co-Authors: Ariel Smith, B.S.N., R.N., Cory Patrick, Sarah Georges Denaud, M.D., Robert Ryan Leahy, M.D., M.S., Aarti Uberoi Jerath, M.D., M.A., Gerson J. Knijnik, M.D., Viral M. Patel, Angela Chang, Barbara J. Coffey, M.D.

SUMMARY:

Abstract: Hospital readmissions have been a focal point in health research due to concerns over increasing admission rates for youths, effectiveness of inpatient care, variable post-discharge outcomes, availability of aftercare treatment, and concerns of overall hospitalization burden. The goal throughout a patient's hospital stay remains to provide continual risk assessment, psychiatric crisis care, and facilitate safety and stabilization prior to discharge into the community. Despite efforts to prevent readmission

to inpatient facilities, adolescent readmission rates are as high as 19-28% within the first six months. Utilizing the American Hospital Association's Framework for Classification of Readmission, this literature review aims to determine factors influencing readmission rates of youth treated in inpatient hospital settings and investigate interventions used to reduce psychiatric readmissions. With the assistance of a research librarian, multiple databases were included (Cochrane, Embase, and Pubmed) in our review. Search terms of "Readmission", "Re-hospitalization", "Psychiatric", "Psychiatry", are used in the review. Studies with more than half of the population over the age of 18 and studies addressing recidivism, juvenile detention centers or correctional facility admissions were excluded from the analysis. Articles will be reviewed using established inclusion and exclusion criteria following title, abstract and full-text review. The results and conclusions from the review will be utilized to examine factors affecting readmission rates and address challenges facing acute psychiatric care and aftercare interventions for youth.

No. 49

Characteristics and Outcomes of Children That Suffered Sexual, Physical and Emotional Abuse: A Single-Center Retrospective Cohort Study

Poster Presenter: Reinhard Dolp, M.D., M.Sc.

SUMMARY:

Background: Abused children and youth have special mental health needs and characteristics that, are yet to be fully understood to improve care and prevent adverse outcomes. This single-center retrospective cohort study evaluates clinical characteristics and outcomes of abused patients below 18yrs, seen in an acute psychiatric clinic. Methods: This is a retrospective cohort study of patients assessed by the Child and Adolescent Urgent Consult Clinic from 2014 to 2016. This university clinic serves patients <18years who are deemed to be in crisis, need to be assessed within 48h, but do not require hospital admission. Clinic data base gathers information on demographics, previous hospital admissions, referral diagnosis, clinic assigned diagnosis, and outcome after assessment. First, we compared all patients that reported any type of abuse (sexual, physical, or emotional) with non-abused patients. Then, we stratified the abused patients into children that suffered only one type of abuse vs. children that suffered all three types. Lastly, we compared patients that experienced different kinds of abuse with each other. Statistical significance was determined via t-test and chi square with Fisher's exact test. Results: The analysis included 1465 patients - 451 that reported abuse (mean age=15, SD=2.0, 51% male) and 1014 non-abused patients (mean age=14, SD=2.6, 62% male). The Abused group had a higher prevalence of substance abuse (53% vs. 31%, $p<0.001$) and were bullied more often (46% vs. 41%, $p<0.05$), had significantly higher suicidal ideation (72% vs. 66%, $p<0.05$) which was the main reason for referral. The abused group had less behavioral problems (16% vs. 21%, $p<0.05$) and anger/aggression (11% vs. 18%, $p<0.05$). Abused patients were not only seen more often by a psychiatrist before being referred to us (14% vs 8%, $p<0.01$), but they also required more hospital admissions after assessment (8% vs. 4%, $p<0.01$). PTSD was a more common diagnosis in the abused group (7% vs 1%, $p<0.001$) but no other diagnostic differences were found. Children exposed to all three types of abuse had more self-harming compared to ones that suffered from only one type (34% vs. 16%, $p<0.01$). The abused group had more past psychiatric contact (23% vs. 10%, $p<0.05$) and a higher rate of PTSD (15% vs 5%, $p<0.05$). Surprisingly, when comparing children that suffered exclusively from emotional vs. physical vs. sexual abuse, no relevant difference could be found. Conclusion: Abused patients were more suicidal and had increased earlier contact with the mental health system. This finding further highlights the need for early recognition and intensified psychiatric care of abused children. Co-occurrence of different types of abuses seems more predictive of self-harming behaviours and mental health service needs than types of abuses itself.

No. 50

When Genetic and Medical Comorbidities Confound the Psychiatric Presentation

Poster Presenter: Sabrina Ali, M.D.

SUMMARY:

An integrative approach to medical care is becoming

common and yet specialities in medicine continue to operate with minimal interaction in the outpatient setting. In an adolescent patient with progressive neurological deficits and uncommon genetic variants, a collaborative approach is necessary to facilitate proper psychiatric diagnosis and treatment. A 15-year-old Filipino-American male, born in Illinois, domiciled with parents, enrolled to start the 10th grade in regular education was brought to the psychiatric emergency room by parents' due to patient's report of depressed mood with thoughts of wanting to "hang himself". Patient has a psychiatric history of unsuccessful treatment with Zoloft 50mg for depression three months prior and a medical history of progressive hemiparesis of right upper extremity and sensorineural hearing loss with +GLB2 mutation. He presented with greater than 3-week history of decreased appetite, increased sleep, low energy, poor concentration, suicidal ideation and anhedonia. On interview, he was oddly related, hypervigilant, at times appeared internally preoccupied and reported intermittent auditory hallucinations of "non-distressing" female voices. On the unit, he presented with speech latency, alogia, isolative behavior and concrete thinking. He has a positive family history of depression in father and suicide in father's cousin. Genetic testing was completed that showed mutations in GJB2, SV2A, and UTRN. Minimal understanding of genes SV2A and UTRN complicate his presentation due to limited mutation studies demonstrating possible correlations with the GABAergic system, as well as one case report of new onset schizophrenia. Neurological history revealed that at 7 years old, following a 3-day febrile illness with no clear etiology, patient developed acute right hand and elbow weakness. Initial MRI of cervical spine showed cord swelling from C5-C7, which was normal at 3-month follow-up. MRI of brain was also normal. EMG studies showed diffuse motor nerve damage with axonal loss. Patient initially demonstrated improved functioning of right side with physical therapy. One year ago, patient progressively developed atrophy of right upper extremity including face, leading to significant disability and low self-esteem. The etiology of the patient's neurological deficits is unlikely to directly contribute to the psychiatric presentation; however, his disability is a psychosocial stressor which had not been addressed until he became isolative and suicidal. This case illustrates the importance of an integrative approach. Throughout the course of his illness, each speciality approached his medical concerns in silos, preventing a comprehensive understanding of his declining medical presentation. His psychiatric presentation remains diagnostically uncertain due to a lack in collaborative care. Given the complexities of this case, knowledge and information exchange between specialists is necessary to provide adequate treatment.

No. 51

Understanding Parental Alienation

Poster Presenter: Kunal Maini, M.D.
Lead Author: Astik Joshi, M.D.
Co-Authors: Shawn E. McNeil, M.D., Lee Stevens, M.D., Maneek Kaler, M.D.

SUMMARY:

Parental Alienation is a highly under-recognized form of child abuse. It is especially important for the clinicians to recognize it in the field of Child and Adolescent psychiatry. Through conflict over an extended period of time, either the unfavored parent or the affected child come to the conclusion that they no longer wish to have a relationship with the other, as the emotional and physical results of having one outweighed the benefits.

No. 52

Recidivism Among Adolescents With Substance Use Disorder

Poster Presenter: Kunal Maini, M.D.
Co-Authors: Astik Joshi, M.D., Shawn E. McNeil, M.D., Maneek Kaler, M.D., Lee Stevens, M.D.

SUMMARY:

Our case review indicated that many young people who persistently abuse substances often experience an array of problems such as academic difficulties, health and mental related problems, poor peer relationships, and involvement with the juvenile justice system. Substance abuse is associated with both violent and income-generating crimes by youth. This increases fear among community residents and the demand for juvenile and criminal justice services, thus increasing the burden on these resources. Gangs, drug trafficking, prostitution, and growing

numbers of youth homicides are among the social and criminal justice problems often linked to adolescent substance abuse.

No. 53

Deutetrabenazine Versus Valbenazine: Which One Would You Choose for Tardive Dyskinesia?

Poster Presenter: Kunal Maini, M.D.
Co-Authors: Astik Joshi, M.D., Lee Stevens, M.D., Maneek Kaler, M.D.

SUMMARY:

Tardive dyskinesia is an uncontrolled, often irreversible, movement of the face, tongue, trunk and extremities that occur in patients having been treated with long term dopaminergic antagonist medications. In early 2017 the FDA approved Valbenazine, and most recently Deutetrabenazine, for the treatment of tardive dyskinesia. Upon comparing and contrasting the two medications, it was found that Valbenazine and Deutetrabenazine exerted their affects through similar mechanisms of action; reversibly inhibiting Vesicular Monoamine Transporter type 2 (VMAT 2), which reduces the secretion of monoamines, such as dopamine, serotonin, norepinephrine and histamine. Our literature review will demonstrate that both medications had promising results but with side-effects that may hinder the choice of selecting one or the other. It was discovered through our research that Valbenazine side effects included QT interval prolongation and drowsiness, in comparison to Deutetrabenazine, which had a variety of side effects ranging from sedation and fatigue to GI upset and hepatic impairment, as well as a black box warning for depression and suicidality in patients with Huntington's disease. Furthermore, it was found that Valbenazine was easier to administer, as it required a daily dose of 40mg/day, being increased only to 80mg/day a week later, whereas Deutetrabenzine had to be titrated to a recommended dose of 12mg-48mg with 6mg tablets. There are now only two available treatment options for tardive dyskinesia. More research needs to be done as there are no head-to-head trials of valbenazine vs. deutetrabenazine. The choice of the drug should be patient based, depending on individual tolerability including certain risks vs. benefits in that specific patient.

No. 54

Treatment Modalities for Self-Cutting Behavior: Case Report

Poster Presenter: Shahan Sibtain, M.D.
Co-Authors: Naveed Butt, Sheema Imran, M.D., Asghar Hossain, M.D.

SUMMARY:

Shahan Sibtain MD, Naveed Butt MD, Imran Mirza (M.B.B.S), Sheema Imran MD, Asghar Hossain MD

Self-Injury also called self-mutilation, self-harm or self-abuse is a group of behaviors which involved deliberately harming your own body surface area by cutting, burning, scratching, bruising or infecting oneself in the absence of suicidal intent. It can be a symptom of various psychiatric illnesses: Borderline personality disorder, Bipolar disorder, Major depressive disorder or Schizophrenia. It can also be due to inner conflicts, stressors, family problems, impulsivity or sense of hopelessness. We present case of 16 years old female who came to ER with superficially cutting behavior secondary to acute stressors and mild depressive symptoms requiring inpatient admission. She was treated with SSRI with counselling and therapy while she was inpatient. There is no single treatment modality to address the self-cutting behavior. If the behavior is secondary to Depression, Anxiety or Psychosis then addressing the psychiatric illness is the best option and then comes the treatment of self-cutting. The best treatment option is the combination of medication and psychotherapy which involved cognitive behavioral therapy, dialectical behavioral therapy, interpersonal therapy or stress reduction and management skills. Cognitive/behavioral therapy helps individuals understand their negative, unhealthy beliefs and replacing those beliefs with positive thoughts. Dialectal behavior therapy helped the individual in managing emotions, improve interpersonal relationships and help to cope with stress. There is a high role of group sessions and family therapy in the management of self-cutting behavior. Hospitalization either short term or long term may be needed depending upon the severity of illness. Medications may be needed but no specific medication is there to address the self-cutting behavior, medications can be given for the treatment of psychiatric illness like depression or

psychosis if the self-cutting is secondary to these disorders. The long-term prognosis is poor especially in adolescents as it is very difficult to treat and resulting in readmission.

No. 55

Management of Psychosis and Mood Symptoms in a Patient With Possible Polysystic Ovarian Syndrome

Poster Presenter: Shahan Sibtain, M.D.
Co-Authors: Naveed Butt, Sheema Imran, M.D., Asghar Hossain, M.D.

SUMMARY:

Naveed Butt M.D., Vasmeen Ratra, Shahan Sibtain M.D., Sheema Imran M.D., Asghar Hossain, M.D. We present a case of 44 years old female with established diagnosis of schizoaffective disorder who presented with an acute episode of psychosis presenting with persecutory delusions, decreased sleep, hyper-talkative secondary to noncompliance with her medications. On examination she had features like Hirsutism (with male-pattern hair growth), obesity, and menstrual disturbances etc suggesting hyperandrogenism possibly secondary to PCOS. She was tried on Paroxetine, Ziprasidone, Haldol, Risperidone, Depakote, and Lithium with limited response due to noncompliance with the medications. It appears that her physical sign and symptoms could be secondary to side effects of the medication she was tried on in the past. There has been reported association between PCOS and VPA, with contradictory results. There are various mood stabilizer like lithium, valproate, lamotrigine and various atypical antipsychotics available for the management of mood symptoms in bipolar disorder. Depakote form of valproic acid is approved for the acute phase of bipolar disorder. It is also commonly used for maintenance treatment. Valproate is more effective in rapid cycling and mixed episode bipolar disorder than lithium, however there is also increased noncompliance associated with secondary to the side effect profile of the medication. There is also increasing concern due to these side effect which ranges from gastrointestinal (GI) distress and sedation, to menstrual disturbances, polycystic ovaries and hyperandrogenism, making management a challenge for the psychiatrist. Through our case we will attempt to discuss the treatment modalities available to control the psychiatric symptoms while minimizing the side effect profile

No. 56

Evolution of Function and Sleep in a Sample of Schizophrenic Patients During One Year of Treatment With Long-Acting Injectable Paliperidone Palmitate

Poster Presenter: Adolfo Benito

SUMMARY:

Background: Poorer function in schizophrenia is related to poorer quality of sleep and to an increased prevalence of sleep disturbances and insomnia of all types in schizophrenic patients. Drugs such as long acting injectable paliperidone palmitate have been shown to be effective in improving both function and sleep. Objectives: To assess the evolution of function and sleep in a sample of patients diagnosed with schizophrenia during one year of treatment with paliperidone. Methods: Schizophrenic patients from three Mental Health units in the province of Toledo (Spain) were recruited. The inclusion criteria were an age over 18 years, a diagnosis of schizophrenia (based on the ICD-10 criteria), the start of treatment with long acting injectable paliperidone palmitate, and the non-utilization of any drugs such as hypnotics or sleep correcting agents. A series of demographic variables were recorded and the PSP (Personal and Social Performance) scale was used to assess function, while the COS (Sleep Oviedo Questionnaire) scale was used to evaluate subjective sleep quality and the severity of insomnia (categorical and dimensional variables of the scale). The scales were again applied 3, 6 and 12 months after the start of treatment. Results: N=97 patients (73 males and 24 females), with a mean age of 38 years. The predominant diagnosis was paranoid schizophrenia (62%). There were 7 dropouts during the year of follow-up. The results showed an improvement in PSP score during the 12 months, manifesting from the third month (ANOVA, $p<0.05$). Likewise, statistically significant differences (ANOVA, $p<0.05$) were observed with the COS scale for both severity of insomnia and subjective sleep quality; these results persisted over the year of follow-up and were manifest from the third month.

Conclusions: Oral paliperidone improved function and sleep in our sample of patients diagnosed with schizophrenia during one year of treatment, improving subjective sleep quality and reducing the severity of insomnia.

No. 57

Analysis of Internalized Stigma and Attitude to Medication in Schizophrenic Sample During One Year of Treatment

Poster Presenter: Adolfo Benito

SUMMARY:

Background: Non adherente is a mayor problem in the treatment of schizophrenia. Its high prevalence, potentially severe consequiences and associated costs make this phenomenon a priority issue. Most of the publishes reports confirm the significant contribution of attitudes towards treatment and its impact on adherence and clinical outcomes. Otherwise internalized stigma refers to the process by which individuals with mental illness apply negativa sterotypes to themselves, expect to be rejected by others, and feel alienated by society. Internalized stigma is related with quality of life and treatments adherence. Objective: To assess the evolution of internalized stigma and attitudes towards medication in a sample of patients diagnosed with schizophrenia during one year of treatment with Long Acting Injectable Paliperidone Palmitate. Method: The sample included a total of 59 outpatients schizophrenic patients from three Mental Health units in the province of Toledo (Spain) were recruited. The inclusion criteria were an age over 18 years, a diagnosis of schizophrenia (based on the ICD-10 criteria), the start of treatment with Long Acting Injectable Paliperidone Palmitate, and the non-utilization of any drugs such as hypnotics or sleep correcting agents. A series of demographic variables were recorded and the ISMI (Internalized Stigma of Mental Illness) scale was used to assess internalized stigma, while the DAI (Drugs Attitude Inventary) scale was used to evaluate the attitudes to medication The scales were again applied at baseline, 6 and 12 months after the start of treatment Intruments: The Drugs Actitude Inventary (DAI 30) is an established, reliable self-report instrument that evaluates patients' perceived effects and benefits of maintenance antipsychotic drug therapy. The Internalized Stigma of Mental Illness Scale (ISMI) assess different aspect of stigma . It was consist of twentynine items are grouped into five subscales Results: N=59 patients (34 males and 25 females), with a mean age of 42 years. There were 2 dropouts during the year of follow-up. The results showed an improvement in ISMI score during the 12 months, manifesting from the third month (ANOVA, $p<0.05$). Likewise, statistically significant differences (ANOVA, $p<0.05$) were observed with the DAI scale for; these results persisted over the year of follow-up and were manifest from the third month. DAI baseline 11,5 (SD 2,3), 11,8 three months (DS 2,4) and 12 months 12,7 (SD 2,1). Conclusions: In our sample of patients diagnosed with schizophrenia during one year of treatment with Long Acting Injectable Paliperidone Palmitate results of the study shows an improved attitude to the medication and internalized stigma.

No. 58

Right-Sided Intracranial Lesions in Active-Duty Service-Members Presenting With First-Episode Psychosis

Poster Presenter: Adrian Manuel Cuellar, M.D.
Co-Author: Laura Francesca Marrone, M.D.

SUMMARY:

Although primary psychotic disorders remain amongst the most disabling, costly and taxing ailments among the general population, there is little consensus as to what constitutes an adequate evaluation of a patient presenting with symptoms of first episode psychosis. The Psychiatric Transition Program, at Naval Medical Center San Diego, is the only first episode psychosis program within the Department of Defense located at one of the three Navy Military Treatment Facilities. Each service member presenting to this program undergoes an extensive laboratory and radiological examination to exclude medical causes that may be contributing to their current presentation and to address these reversible causes of psychosis if identified. This poster will examine three cases of active duty service members, each with no prior psychiatric history, who were found to have right sided temporal horn and para-hippocampal lesions during this evaluation. The discussion will highlight the impact of these lesions on the patients' initial

presentation and to what extent the lesions impacted their treatment while enrolled in the Psychiatric Transition Program. These cases demonstrate the critical importance of access to a multidisciplinary team including psychiatrists, psychologists, neurologists, radiologists, primary care physicians, case managers, and psychiatric technicians. A comprehensive approach to evaluation and work up prepared these service members transitioning to life outside of the military, which included establishing care with Veteran's Administration treatment programs and developing a transition plan for career and educational advancement.

No. 59

Acalculia and Right-Left Disorientation in Five Individuals Presenting With Psychotic Features Across Multiple Diagnoses

Poster Presenter: Adrian Manuel Cuellar, M.D.
Co-Author: Laura Francesca Marrone, M.D.

SUMMARY:

Gerstmann's syndrome and its constellation of symptoms including finger agnosia, left-right disorientation, agraphia and acalculia is a known entity within the fields of both neurology and psychiatry localized to the left angular gyrus. Here we present six individuals varying in age, ethnicity, and diagnoses who all presented with one similar characteristic being that of positive symptoms of psychosis in the context of either a primary psychotic disorder or mood disorder with psychotic features. Although these individuals suffered from either schizophrenia, bipolar disorder with psychotic features or major depressive disorder with psychotic features, they all demonstrated acalculia and left-right disorientation at the peak of their illness severity. As these individuals remained engaged in treatment, both talk therapy and pharmacotherapeutics, these issues resolved. These cases suggest a potential common etiology for psychotic symptoms across multiple diagnostic domains. Additionally, resolution of symptoms with treatment raises the question as to whether the causative etiology is secondary to hypoperfusion to this region or neurotransmitter imbalance regulated with antipsychotic regimens. We will discuss the comprehensive evaluation completed for each individual patient, elaborate on their treatment regimen, and propose future options for investigation regarding the role that the left angular gyrus may play in the formation of psychotic symptoms across multiple disorders.

No. 60

Management of Schizophrenia: An Educational Intervention

Poster Presenter: Ori-Michael J. Benhamou, M.D.
Co-Authors: Bora Colak, M.D., M.P.H., Saad Rahmat, Yuliya Hryb, M.D., Ifeoluwa Osewa, M.D., M.P.H., Alexander C. L. Lerman, M.D.

SUMMARY:

Schizophrenia is a chronic psychiatric disorder with a worldwide prevalence of 1.1%, independent of ethnic or economic background. Although there is no definitive cure, management of schizophrenia includes psychosocial and pharmacologic interventions. It is recommended that a pre-treatment assessment, focusing on factors that may be adversely affected by antipsychotic medications, be performed prior to initiating pharmacologic therapy. Educational Intervention: Disorder of the Quarter (DOQ): Schizophrenia is a 10-week didactic program designed to provide psychiatry residents training at WMC with relevant information regarding the epidemiology, biological bases for disease, DSM-V criteria, scientific data (including CATIE and CUTLASS trials), and management guidelines of schizophrenia spectrum disorder (primarily PORT and TMAP). Prior to this educational initiative, we reviewed charts to assess the management of schizophrenia patients at the Behavioral Health Center at Westchester Medical Center (WMC). One year later, following the DOQ, a similar chart review was conducted. Change in practice and adherence to recommendations were assessed. WMC Chart Review: A cross-section of patients (N=33) discharged from WMC in October and November 2016 with a primary diagnosis of Schizophrenia, or related Psychotic Disorder, was chosen for chart review. Average age was 30 years with a mean hospitalization stay of 39 days (3-92 days). 44% of the patients presented with substance abuse, with cannabis being most prevalent (31%). Patients were managed with a variety of antipsychotic medications: Risperidone 30%, Haloperidol 18%,

Quetiapine 18%, Olanzapine 12%, Clozapine 12%, Aripiprazole 12%, Perphenazine 9%, Fluphenazine 3%, and Lurasidone 3%. 82% of patients were discharged on SGAs (Second Generation Antipsychotics), 30% on FGAs (First Generation Antipsychotics), and 21% on multiple antipsychotics. 18% received Long-Acting Injectable antipsychotic agents. Patients with first hospitalization comprised 30% of the sample and were discharged on the following medications: Risperidone (40%); Quetiapine (30%); Haloperidol (20%); Aripiprazole (10%); combination of Quetiapine and Olanzapine (10%). Patients discharged on Clozapine had an average of 14 prior hospitalizations versus 2 for non-clozapine patients (p=0.0001). Although the post-DOQ sample was younger (p=0.0146), other demographic variables were not significantly different for gender, length of stay, recidivism, substance abuse, co-morbidity, BMI or Total Cholesterol. Treatment with SGAs was significantly increased (p=0.0165) post-DOQ. BMI as well as Heart Rate and Blood Pressure were collected in 100% of patients. Fasting Lipid panel and Hemoglobin A1c were collected in in 58% and 48% of patients, respectively. Following the education intervention, the choice of antipsychotic medication for Schizophrenia more closely followed best practice guidelines. However, there remains room for improvement, particularly in the collection of pre-treatment assessment metrics.

No. 61

Prodromal Tales of Teenage Dope

Poster Presenter: Peffin Lee, D.O.

SUMMARY:

Mr. M., an 18 year old male with past psychiatric history of unspecified depressive disorder and unspecified psychotic disorder, presented to the ED via police after being found sleeping outside in the middle of the night. His mother petitioned for involuntary hospitalization due to concerns of suicidal ideation with recent overdose of fluoxetine and bupropion. Involuntary admission to an inpatient mental health unit was pursed after the patient denied the content of the petition, rather stating his intention was to "get high." He presented with blunted affect, avoidant eye contact, vague speech with increased latency to response, and psychomotor retardation. He isolated to his room and was often found lying in bed. At other times he was found lying on the floor at the end of the hallway. He reported practicing "meditation" to heal himself. Serial MOCAs were completed showing deficits in attention, language, abstraction and delayed recall, He was restarted on olanzapine and sertraline which were titrated to 20mg PO QHS and 150mg PO daily, respectively, to target negative symptoms. Review of records showed Mr. M.'s first psychiatric hospitalization was one year ago in which he abstained from food and fluid to be closer to "God." He required a medical admission and placement of NG tube along with IV hydration. He was discharged into a partial hospitalization program affiliated with our hospital system. A diagnosis of major depressive disorder with psychosis vs schizoaffective was considered at that time. His second hospitalization, which was on our mental health unit, occurred nine months later in which he presented with thoughts that his mother had sexually assaulting him. Collateral was obtained from mother and father. Due to history of LSD and cannabis wax use along with several overdoses on antidepressants and ADHD medications, his outpatient psychiatrist reduced doses of psychotropics and recommended substance use treatment. Family meetings were held with each parent who expressed frustration with their son's lack of motivation in moving forward in life. We present a longitudinal case report of likely first break primary psychosis with persistent negative symptoms. The initial onset of depression and prodromal schizophrenia occur around the teenage years. Predominantly negative symptoms can be mistaken for major depressive disorder. However, course and prognosis of the former lead to poorer outcomes. The teenage years also mark a time for experimentation with psychoactive substances that may trigger or exacerbate underlying symptoms. Furthermore, the lack of motivation and decreased activity may lead others to think there is a defect in the individual's character or attributable to substance use rather than a consequence of the illness. In this poster, we discuss the challenges and importance of differentiating negative symptom etiology from depression, primary psychotic disorder, or induced by substance use.

No. 62

Early Detection and Management of Clozapine-Induced Myocarditis: A Case Report and Literature Review

Poster Presenter: Matthew Craig Parker, D.O.
Co-Authors: Phillip Arellano, M.B.B.S., Marc Katz, Swaiman Singh, Diane Edith Custer, M.D.

SUMMARY:

Background:Clozapine is an atypical antipsychotic medication with proven efficacy for treatment-resistant schizophrenia and suicidality reduction. A rare and potentially lethal side effect is clozapine-induced myocarditis. Its presentation is often overlooked in clinical practice due to its lack of specificity with regards to signs and symptoms. Case Description: A 40-year-old Caucasian male with a psychiatric diagnosis of schizophrenia was admitted to the psychiatric unit for worsening depression, suicidal ideation, and worsening auditory hallucinations. His medical history was significant for hypothyroidism, non-insulin dependent diabetes mellitus, Charcot osteoarthropy, and untreated chronic lymphocytic leukemia. Psychiatric medication on admission included ziprasidone for psychosis with past trials of other antipsychotic medications. Due to lack of efficacy in controlling psychosis and persistent suicidal thoughts, ziprasidone was gradually tapered and clozapine was started with steady dose titrations. While on a dose of clozapine 125 mg, the patient had a fever of 100.9 F and was tachycardic with a heart rate of 129 beats per minute. He experienced at times symptoms of shortness of breath and left-sided chest pain. When these signs and symptoms continued to persist, a medicine consult was obtained. A pulmonary embolism was ruled out with a negative CTA of the chest. Troponin level was significantly elevated at 5.12 ng/mL, indicating cardiac damage. The patient was transferred to the medical floor for continued management. An echocardiogram showed a reduced ejection fraction of 35-40% with global hypokinesia of the left ventricle and borderline dilation, a clinical picture consistent with myocarditis. Clozapine was discontinued and the patient was started on aspirin, an ACE-inhibitor, and a beta-blocker. Once medically stabilized, the patient returned to the psychiatric unit for continued care. Discussion: Myocarditis is a rare side effect of clozapine, with an estimated incidence rate of <0.1 to 1.0% during the first two months of treatment. The lack of specificity in terms of signs and symptoms contribute to this diagnosis often being overlooked. As a result, some researchers estimate the true incidence of clozapine-induced myocarditis to be much higher. Increased awareness of this side effect and its diagnostic indicators can help physicians detect early development of myocarditis and improve patient safety for patients taking this medication.

No. 63

Investigating Lupus Psychosis Versus Late-Onset Schizophrenia

Poster Presenter: PhuongTam Nguyen, M.D.

SUMMARY:

Introduction: The typical age of onset for schizophrenia is in late adolescence or early twenties, with slightly later onset in females. However, some studies have shown that 20% of primary psychosis can present after the age of 40. There are questions of validity when a diagnosis of schizophrenia is made in older patients since there are possibilities for alternative organic processes. Schizophrenia has an interesting association with systemic lupus erythematous because between 14% and 75% of patients with lupus are estimated to have neuropsychiatric symptoms and about 5% with hallucinations and delusions. Case report: This is the case of a 62-year-old Hispanic female with a past medical history of lupus and no previous psychiatric history who presented for self-neglect due to new onset psychosis. Since her mother passed away 9 months prior to presentation, she began having delusions of being impregnated by the spawn of Satan so she stopped eating in order to not feed it. She exhibited bizarre involuntary movements in her neck and shoulders, which she attributed to having electricity running through her and being controlled by a video game that her grandson plays. She subsequently unplugged all the electronics in the house. She would see a morphed face when she looked in the mirror, holes in her arms and multiple hands. CT and MRI head showed no acute changes. There were initial concerns for psychosis secondary to lupus cerebritis. Some inflammation markers, ESR and CRP, were elevated, however, her ANA was

negative along with the rest of the lupus panel. She was started on Risperidone. Within a week, she showed marked improvements in her delusions, hallucinations and involuntary movements that were appreciated by her family members. Conclusion: This case illustrates that schizophrenia, once thought to be an early onset disorder, can manifest late in life but often goes undiagnosed due to social isolation, cultural biases, reluctance from family.

No. 64

Catatonia and Incipient Neuroleptic Malignant Syndrome With Paliperidone: A Case Report

Poster Presenter: Rodney Uy, M.D.
Co-Authors: Yassir Osama Mahgoub, M.D., Jenna Hartman, D.O.

SUMMARY:
Catatonia and Incipient Neuroleptic Malignant Syndrome with Paliperidone. A Case Report Introduction: Neuroleptic malignant syndrome (NMS) is a life-threatening condition associated mainly to antipsychotic medications and occasionally with other psychotropics. Incipient NMS, a term used to describe clinical presentation suggestive of NMS but not meeting all the criteria, can pose diagnostic and treatment challenges due to the possibility of misdiagnosis and inappropriate management. Catatonia and NMS share similar clinical features and pathology. Previous reports have described the occurrence of NMS in catatonic patients treated with antipsychotics, suggesting its role in progression to NMS. Benzodiazepines are used for treatment of both catatonia and NMS which may alter the presentation of NMS to a milder form that could be missed. We present a case of incipient NMS with Paliperidone in a patient who developed catatonia during his treatment. Objectives: Highlight the need for careful management of psychotropic medication in patients with catatonia as symptoms overlap with NMS, which can delay diagnosis and treatment. Case report: 25y/o Chinese male with no past medical or substance use history. He has history of schizoaffective disorder and previous catatonia. He was admitted for manic symptoms. His medications on admission were Lithium 600mg PO BID, Clozapine total of 500 mg daily and Propranolol 20mg PO BID. Lithium titrated to 1500mg PO qhs and due to history of noncompliance, Clozapine was cross-tapered with Paliperidone and titrated to 12mg daily over 7 days. On day 7 he displayed catatonic symptoms of mutism, posturing, refusal of eating and drinking and was started on Lorazepam with dose increased to 6mg daily resulting in mild improvement. On day 8 on Paliperidone, CPK was 194 U/L. His temperature increased to 38 briefly and remained normal for the rest of the day. On day 9, CPK increased to 962 U/L and subsequently to 1735 U/L. There was no rigidity or fever to suggest NMS but he appeared to be more confused and had vital instability. Patient subsequently required transfer to medical service for IV hydration, IV Ativan and started on bromocriptine 2.5MG Q8hrs. All psychotropics were stopped and his confusion, CPK and vital instability improved and he was transferred back to inpatient psychiatry. His catatonia continued for another three weeks and treated with lorazepam. He was discharged on Clozapine. Conclusion: NMS can present as a spectrum with some patients developing milder forms that lack the expected vital instability. This can represent a clinical challenge for diagnosis. As catatonia shares similarity with NMS in terms of - symptoms, pathology, and treatment, discontinuation of antipsychotics and other medications such as lithium may be warranted upon emergence of catatonia as it may progress to NMS.

No. 65

An Investigative Diagnostic Complication: Schizo-Obsessive Disorder

Poster Presenter: Rose De Silva
Co-Author: Sarayu Vasan, M.D., M.P.H.

SUMMARY:
Introduction: A link between Obsessive Compulsive Disorder (OCD) and psychotic disorders has been well documented for several decades. Although, the clinical relationship or the specific subtype termed “schizo-obsessive” has not been clearly documented or understood, it has been noted in literature for many years as well. One hypothesis states that OCD may precede schizophrenia as a prodrome. However, that would mean OCD symptoms should remit, rather than persist when psychosis become apparent in a patient; this phenomenon is not observed. Thus, the specific subtype “schizo-obsessive” can be explained as coexistence of

obsessive compulsive symptoms (OCS) in schizophrenic patients. It is important to differentiate between the compulsions of OCS from repetitive delusional behavior in schizophrenia. Compulsions lack rational justification, although it is performed based on the obsessions, whereas repetitive delusional behavior is completely justified based on the delusion. Case: This case report describes a 64-year-old Caucasian male who presented with symptoms suggestive of schizophrenia and obsessive-compulsive disorder who responded to fluvoxamine and ziprasidone. Discussion and Conclusion: It is imperative to understand and learn more about schizo-obsessive subtype and to give its due respect as the prevalence rate of the disorder is observed to be 12.5% -25%. Hemron S et al looked at prevalence of OCS among hospitalized schizophrenic patients and concluded that 10% of schizophrenic patients had significant OCS related to both obsessions and compulsions and that OCS positively correlates to duration of illness. Another study revealed that prevalence of OCS in schizophrenic patients as high as 64% and about 30% of schizophrenic patients meet the Diagnostic and Statistical Manul of Mental Disorders (DSM) criteria to be diagnosed as OCD. The difference in prevalence of these two studies might be due to the differences in study methods. Nonetheless, an average prevalence of 12.5% - 25% of schizo-obsessive subtype is much higher than the prevalence of OCD and schizophrenia, individually. With the current available information, it is difficult to discern the incidence rate of schizo-obsessive disorder, mainly because such a diagnosis is not currently available in the DSM. Here, we put forth more evidence of schizo-obsessive disorder by presenting a case study that highlights the importance of identification and treatment of OCD in schizophrenia. By doing so, we hope to draw more attention to the subject and the need for clearer diagnostic guidelines for this specific subtype.

No. 66

A Longitudinal Follow-Up Study on Multiple Sleep Latency Test and Body Mass Index of Type 1 Narcolepsy Patients in Korea

Poster Presenter: Jihyeon Lee
Co-Authors: Yoo Hyun Um, Seung-Chul Hong

SUMMARY:
Background: Narcolepsy is a chronic disorder with numerous adverse long-term consequences, including increased comorbidities including obesity, high mortality rates and decreased quality of life. With emerging attention to the long term course of the disorder and importance of accurate diagnosis, diagnostic stability of multiple sleep latency test(MSLT), mostly frequently used to identify narcolepsy, is often challenged. Methods: In this study, we compared the baseline and follow-up demographic characteristics and body mass index(BMI) of type 1 narcolepsy patients. Moreover, results from repeated MSLT conducted on the 48 type 1 narcolepsy patients were compared, with mean follow up of nearly ten years. Results: BMI from the baseline to the follow-up visit was significantly increased in the participants. There were no significantly different parameter changes in MSLT results. Conclusions: MSLT has good test-retest validity in type 1 narcolepsy patients. Close surveillance for the detection and management of obesity is warranted in clinical settings. This study does not report any financial interests or potential conflicts of interest.

No. 67

Anorexia Nervosa in a Male Patient With Schizoaffective Disorder, Bipolar Type

Poster Presenter: John H. Jung, M.D.
Co-Authors: Joseph D. Zollo, M.D., Nadia Mohamed El Fangary, M.D., Ph.D., Julie A. Niedermier, M.D.

SUMMARY:
Mr. F. is a 37 year-old Caucasian male with a history of schizoaffective disorder, bipolar type, and anorexia nervosa, restricting type, who was found unconscious at home with a blood glucose of 20 mg/dL. His BMI was noted to be 13.3 kg/m^2. The patient was medically admitted to correct the electrolyte derangements of refeeding syndrome. He was then transferred to inpatient psychiatry for the treatment of psychosis and an eating disorder. The patient reported a delusion of external control, such that a “watchman” dictated his oral intake and negative perception of body image. Consequently, his food preparation and consumption while hospitalized alternated between ambitious and ascetic, including four days without eating. As the

patient failed to appreciate the life-threatening risk of his weight loss, his family obtained expedited guardianship. Goal BMI for discharge was set to be 16.1 kg/m^2, approximately halfway between his initial BMI and an ideal of 18.5 kg/m^2. The patient was treated with olanzapine and a regimented behavioral plan, with eventual weight gain and resolution of psychosis. The evidence behind the use of antipsychotics as treatment for anorexia nervosa remains limited. Of the antipsychotics, olanzapine has been more widely studied, with meta-analyses showing trends towards an increase in BMI with olanzapine over placebo. Mr. F represents a case where olanzapine was effective in treating both psychotic and eating disorder symptoms. As this case demonstrates, the two disorders may have overlapping neurobiological mechanisms, mutually reinforcing psychopathology, and treatment synergism that warrant further study.

No. 68

A Case Report of Seasonal Recurrent Brief Psychotic Episodes

Poster Presenter: Joseph Ipacs, M.D.

SUMMARY:

We describe a case of a 53 y/o Colombian female with a past history of panic disorder and more remote history of Bipolar Disorder diagnosed in Colombia who was taken to the Emergency Room by her 16 year old son because of a paranoid delusion that her ex-husband was threatening to harm them. Other than anxiety and decreased sleep, there were no other affective symptoms present. The patient would often have brief episodes of paranoia almost every year during the Spring or Summer, noting that she had one time fled to Colombia due to fear for her safety. She was diagnosed with Bipolar Disorder in Colombia, but further history showed no evidence of periods of mania or severe depression. There was no evidence of substance use or addiction. Most of her previous episodes spontaneously remitted without antipsychotic medication. Annual patterns have been observed with affective disorders (1) and clinical syndromes such as cycloid psychosis describe recurrent brief episodes of psychosis with recovery between episodes (2). This case illustrates an interesting example of the emergence of recurrent brief psychotic episodes linked to season of the year.

No. 69

Differentiating Pseudocyesis From Delusional Disorder in a Psychotic Patient

Poster Presenter: Joseph Tosto
Lead Author: Rosemarie Caskey, M.D.

SUMMARY:

Ms. H, a 24-year-old Caucasian female with no prior psychiatric history admitted to the hospital after attempting suicide in County Jail. She was given the diagnoses of unspecified psychosis, sedative hypnotic or anxiolytic use disorder, severe methamphetamine use disorder, and unspecified depressive disorder. The patient was exhibiting what appeared to be multiple fixed delusions, one of which being that she was pregnant. Routine urine pregnancy testing was completed on admission and repeated along with a pelvic examination and abdominal ultrasound to rule out alternate pathology. All tests were negative. The patient was informed of the negative results but continued to believe she was pregnant. The patient had gained approximately twelve pounds in one month with noted abdominal distention. Ms. H described somatic symptoms such as pelvic pressure and pain while endorsing symptoms of feeling a growing pregnancy within her uterus. The patient also reported that she had not had a menstrual cycle in eight weeks. Ms. H began to refuse her medications because she believed “it will harm my baby.” The patient’s Haldol Decanoate dose was increased and within three days, remarkable improvements were noted. The patient began to state “I just don’t feel pregnant anymore.” By the time of discharge, the patient nonchalantly revealed to the treatment team that she had a nexplanon birth control in her upper arm when asked if she planned to use a birth control method outside of the hospital but did not appear to make a conscious connection with her previous beliefs of pregnancy. In this poster, we define pseudocyesis and delusional disorder and discuss the challenges of differentiating the two in a psychotic patient along with scrutinizing psychological antecedents. Although there has been a distinction made between the two, there is still a line of demarcation that remains blurred.

No. 70

Clinical Outcomes in Schizophrenia Patients During First Years of Diagnosis: A Cohort Study

Poster Presenter: Juan Cano, M.D., M.Sc.
Co-Authors: Carlos Pedraza, Rodrigo Cordoba, M.D., Julian Ortegon, Alexie Vallejo

SUMMARY:
The first years after the diagnosis of schizophrenia are crucial for the establishment of parameters involved in the outcome and long-term remission. It is a risk period involving hazards like withdrawal from the general health system, relapses and suicide. This period also concurs with major challenges in development: stable identity, pair's network, vocational training and intimate relationships. Observational study of a cohort of 50 patients with a recent diagnosis of schizophrenia (within five years of baseline visit), followed up during at least three years and up to five years, with periodic evaluations every three months. No changes were made in therapeutic schemes. This registry has the objective to describe the clinical outcomes in this particular group of patients: relapses, total or partial hospitalizations, days free of symptoms; and to suggest possible factors related to that evolution. Diagnosis was confirmed with M.I.N.I. interview, we employed short instruments including Clinical Global Impression – CGI, Global Assessment of Functioning – GAF, and Personal and Social Performance Scale – PSP. Most patients were men, single with secondary school grades.80% of patients experienced prodromal symptoms with a median duration of 426 days (interquartile range – IR 90–914), patients expended a median of 423 days since the beginning of psychotic symptoms (IR 77–823), before the schizophrenia diagnosis were made. Before entering to the cohort, the patients had experienced a median of 2 psychotic episodes (IR 2–4), and 2 psychiatric hospitalizations (IR 2–4). The rate of substance use observed was 36% (Graphic 1). Most patients (96%) were treated with atypical antipsychotic, 16% were in treatment with depot medication, 64% of patients were receiving concomitant medications, and only 8% of patients were receiving non-pharmacological treatment. Satisfaction with medication was negative in 10%, neutral in 20% and positive in most patients (70%). Adherence was described by patient and relatives as high (mean 89%). At the end of the first year, the proportion slightly changed, turning negative in 15%, neutral in 22%, and positive in 63%; Meanwhile the adherence described continued high (mean 84%). Most patients were followed for at least three years, here we describe the relapse and survival rate. There were a higher proportion of males, which could not reflect exactly the whole spectrum of this population. It is noticeable the long period of time the patient spends with prodromal and psychotic symptoms before the diagnosis was made, especially regarding the known impact of the duration of untreated psychosis in the outcome of patients. There is a strong association between schizophrenia and cannabis, the rate of substance use observed in our cohort was 36%, higher than general population and like previous descriptions on literature. Most patients with schizophrenia will have at least one relapse within the first five years.

No. 71

Metacognitive Introspective Accuracy of Social Cognition as a Predictor of Functional Outcomes in Individuals With Schizophrenia

Poster Presenter: Juliet Silberstein

SUMMARY:
Background: Cognitive capacity, competence, and negative symptoms account ?50% of the variance in the functioning of individuals with Schizophrenia. Metacognitive introspective accuracy (IA) has emerged as a new lead. Impaired IA of neurocognition has been shown to be a potent predictor of functional deficits. This research expands on the functional significance of IA to social cognition (SC). Methods: Pearson correlations and regression analyses examined the association of IA in SC and four functional outcome domains. IA was indexed by the discrepancy between clinician(n=64) and patient(n=64) ratings on the Observable Social Cognition Rating Scale (OSCARs), and clinician-rated everyday functioning on the SLOF scale. We used block-entry analyses, entering all the performance-based measures followed by interview-based measures to compare the relative influences of performance-based measures of SC and social competence compared to IA on these same outcomes. Results: This analysis included 64 medically stable people with schizophrenia who had high-contact clinician informants (mean age=38.5,

63% male). There was generally a large effect size for clinician reports (all Pearson r =-.63 to -.38, p<.001) and a medium effect for IA across all functional outcomes (all Pearson r=-.45 to -.23, p <.01). Self-reports were correlated only with everyday activities (r= -.18, p<.05), SC competence only with work (r=.32, p<.001), and negative symptoms only with interpersonal (r=-.3, p<.001). Self-reported OSCARS scores did not significantly enter any of the regression analyses (all t<1.7, p>.09). Additionally, all four regression analyses found that the set of performance based tasks did not contribute as a group to any of the SLOF subscales (all F (7,120)<1.89, all p>.08). However, clinician-ratings predicted all functional domain after controlling for social cognitive performance, and IA was significant for 3/4 of the subscales. The R2 cumulative (clinician and IA) accounted for 31-44% of the variance in interpersonal, everyday activities, and work outcomes (all p =.001). For everyday activities, metacognitive IA did not factor into the model, and clinician ratings accounted for 14% of the variance (p=.001). Finally, clinician and IA SC added 32% of the variance in vocational outcomes accounted for by social competence (R2 incremental=.10, R2 cummulative= .42, all p=001) and 26% of variance accounted for in interpersonal outcomes by negative symptoms (R2 incremental = .09, R2 cumulative = .35, all p=.001). Conclusions: The present study suggests that accurate IA of SC is a stronger predictor of real-world social outcomes than SC capacity, competence, or negative symptoms. These findings also provide evidence that clinician ratings are helpful as a standard against which to judge the accuracy of patients' self-assessments, and may be a highly useful proxy for extensive neuropsychological testing.

No. 72

Expressed Emotion: An Underused Factor in Predicting Outcome of Patients With Psychosis?

Poster Presenter: Kalyan C. Kandra, M.D.
Co-Author: Jeffrey Ali

SUMMARY:

Despite major improvements in psychotropic medications since the advent of Chlorpromazine, identifying and applying factors known to impact outcome decision making in clinical psychiatry seem to be not always identified and taught in modern psychiatry residency training. Expressed Emotion (EE) has been established as such a factor not only in psychotic disorders like Schizophrenia but also in other mental health disorders. The consensus of such studies is that patients who live in families with high EE are more likely to relapse than those who live in families with low EE. This concept is often missed in today's heavily loaded biomedical environment and not always stressed in psychiatric training. Using details from recent encounters with patients who presented to a University Medical Center with psychotic symptoms and the impact of the Expressed Emotion (EE) of the family members of the patients, an attempt is made to correlate these factors with the course of care received by the patient. Using these experiences and a literature review suggestions as to how EE can be identified, evaluated and assessed, and used to improve patient outcome measures are made in this poster presentation.

No. 73

Delusional Parasitosis: Case Report and Review of Literature

Poster Presenter: Katherine Marie Edwards, M.D.
Co-Authors: Lauren Tran, M.D., Garima Singh, M.D.

SUMMARY:

Ms. X is a 61-year-old Caucasian female with a past history of anxiety disorder, major depressive disorder, alcohol dependence, and sexual abuse, with multiple comorbid medical conditions, who is followed in the adult psychiatry clinic for medication management. For several years, this patient has had delusional thoughts regarding "worms" or "bugs" crawling under her skin. These thoughts have recently increased in severity, resulting in frequent scratching and associated abrasions and excoriations on her skin. During clinic appointments, she ruminates on this issue, and shows her providers samples of hair, tissue, and dirt that she claims are bugs that she collected from her skin. She takes multiple pictures of her skin and self-inflicted wounds, using these as evidence that there are bugs on her skin, though without any indication that there are such insects present. Her symptoms are so significant that she awakens at night given reported itching, and eats canned food given concern for

contamination with these parasites. This patient's symptoms have been treated with multiple medications in the past, including combinations of venlafaxine, duloxetine, citalopram, bupropion, lamotrigine, aripiprazole, risperidone, and olanzapine at various times. Her most recent medication has been fluoxetine for depressive symptoms, and quetiapine was added to her regimen for additional anti-psychotic coverage at her most recent clinic visit. While the exact prevalence of delusional parasitosis is unknown, studies have found that this disorder occurs primarily in Caucasian middle-aged or older women, though it has been identified in all age groups and in males. This disorder may be primary, secondary, or organic in origin, representing either a primary psychotic disorder, a disorder associated with another mental disorder (such as schizophrenia or depression), or a disorder secondary to an organic illness. Patients typically experience a perception that small parasites are crawling or burrowing into their skin, and often initially present to non-psychiatric medical professionals. Treatment of this disorder often requires the use of anti-psychotic medications, though additional treatment may be needed based on comorbid mental or organic disease. While randomized trials are limited, available evidence suggests that remission rates are equal with both typical and atypical anti-psychotic medications. In this case presentation, we discuss a patient with this rare illness, and review available literature regarding the treatment and management of delusional parasitosis. Additional information regarding effective treatment of this disorder, especially in patients with multiple comorbid medical conditions (such as this patient), is important given that most patients first present to non-psychiatric medical professionals.

No. 74

A Case of Treatment-Resistant Schizoaffective Disorder That Responded to an Extended Trial of Paliperidone Palmitate

Poster Presenter: Kathleen Margaret Ward, M.D.
Co-Authors: Bilal Ahmad, M.D., Kathleen A. Crapanzano, M.D., Jessica McGovern, Melissa A. Watson, M.D.

SUMMARY:

Schizoaffective disorder is a chronic psychiatric illness believed to be on a continuum between schizophrenia and mood disorder, with features of both. This is a case of a patient with schizoaffective disorder who was treatment resistant and could not tolerate clozapine but responded to high dose paliperidone palmitate (PP) over time. SW, a 25 year-old African American male with a long history of mental illness, presented to the psychiatric emergency department with agitation, violent behavior, thought blocking, and was observed responding to internal stimuli. For the first five months of his admission, trials of oral paliperidone, olanzapine, and lurasidone in conjunction with low dose PP were initiated with no success. Throughout most of the hospitalization, SW continued to have both positive and negative symptoms of psychosis including hallucinations, inappropriate laughter, flat affect, poor hygiene, and being socially withdrawn. A clozapine trial was prohibited by his low neutrophil count (ANC= 1,300 cells/mL). The patient was evaluated with the Montreal Cognitive Assessment Version 7 (MoCA), Brief Psychotic Rating Scale (BPRS), Positive and Negative Syndrome Scale (PANSS), and Brief Negative Symptom Scales (BNSS) three times throughout his treatment course, prior to the initiation of PP 234 mg, as well as at 7 weeks and 9 weeks post-initiation, by a doctoral level graduate student trained in the administration of these instruments who was not familiar with the case. Assessments and ratings were made blind to changes in treatment. Three months after initiation of PP 234 mg antipsychotic monotherapy, and nine months after admission, SW was discharged to a group home. His final evaluation yielded a 73% improvement in his MoCA score from baseline, a 9% improvement in his BPRS score, a 31% decrease in his PANSS score (which represented a 33% drop in his positive symptoms score and a 28% drop in his negative symptoms score), and an 18% improvement in BNSS. SW's case demonstrated the use of high dose PP in stabilization of a patient who was both treatment resistant and unable to tolerate clozapine. In addition to responding to antipsychotic monotherapy with high dose PP, SW was provided time in an acute inpatient psychiatric unit to respond. This case provides an addition to the literature on PP use in refractory schizoaffective disorder in addition to highlighting the importance

of patience for pharmacotherapy to achieve its desired effect.

No. 75

Safety Precautions and Discharge Planning of Patients With Factitious Homicidal Ideation

Poster Presenter: Maria Teresa Carvajal, M.D.
Co-Authors: Luisa S. Gonzalez, M.D., Janani Udaya-Shankar, Joseph Sokpagna Soeung, M.D.

SUMMARY:
Factitious Disorder is a disorder in which a patient intentionally feigns physical or psychiatric symptoms, without a means for secondary gain, to assume the 'sick patient' role. Symptoms may be subjective, such as pain, suicidal or homicidal ideation, making it challenging to determine intentionality and whether it is fully or partially intentional (1). Homicidal Ideation consists of thoughts or considerations of killing another, which may range from an idea to a well-thought out and detailed plan. Studies have indicated that the prevalence of violence in patients with untreated severe mental illness that present with psychosis or delusions can be elevated and can lead to frequent hospitalizations. Guidelines on how to safely discharge a patient who presents with factitious homicidal ideation from the inpatient setting to the community are limited. Here, we describe the case of a 62-year-old male with schizoaffective disorder and poly-substance abuse who had delusions of factitious homicide. The patient verbalized, on several occasions, committing homicide in 1991 for which he claimed to have spent 12 years in jail and being on parole. Collateral history determined that the homicide and time spent in jail had never occurred and were the result of the patient's delusions. This patient's factitious homicidal ideations led to frequent hospitalizations and discharge planning challenges. This case aims to provide clinicians with recommendations for the safe discharge planning of patients who present with factitious homicidal delusions, with the objective of decreasing length of stay and hospitalizations.

No. 76

Acute Psychosis in a Patient With Treatment Noncompliant Graves Disease: A Case Report

Poster Presenter: Sidra Ghafoor, M.D.
Co-Author: Sindhura Kunaparaju, M.D.

SUMMARY:
Thyrotoxicosis has been associated with various psychiatric symptoms such as anxiety, mood lability, depression and rarely psychosis. The link between acute psychosis and thyrotoxicosis especially in the context of Graves Disease is poorly understood. Herein we report a case of a 41-year-old Caucasian female with a psychiatric history of bipolar I disorder and post traumatic stress disorder, with a medical history of Graves Disease, Hypertension, Degenerative joint disease and Chronic headaches. She initially presents to the psychiatric emergency department with recent onset of confusion, bizarre behavior, and delusions of paranoia. Majority of the history was obtained from patient's husband. He reported that patient stopped attending psychiatric appointments and had been only intermittently compliant with psychiatric medications: Abilify and Lamictal. Additionally, she had stopped taking her medications for hyperthyroidism and hypertension for at least three months. Of note, patient had previously refused I-131 treatment preferring to continue taking Methimazole (or PTU). Over the last three to four weeks prior to admission, patient began exhibiting paranoid behavior and poor reality testing. Per husband, she endorsed severe anxiety and mood lability. Once admitted to the psychiatric unit, her treatment was complicated with only partial response to antipsychotics. Various differentials were considered such as Bipolar I Disorder (most recent episode mania with psychosis), schizoaffective disorder-bipolar type, psychosis secondary to a general medical condition (thyrotoxicosis), substance induced psychosis, and acute psychosis not elsewhere classified. Patient's treatment course improved as her underlying thyrotoxicosis was corrected with PTU. In this poster, our goal is to discuss the importance of recognizing psychosis as a manifestation of thyrotoxicosis particularly with Graves Disease. Further, given that psychosis is a rare complication in hyperthyroidism, accounting for only 1% of cases it raises both diagnostic and therapeutic challenges and consequently necessitates collaboration between specialists for optimal care.

No. 77

Folie à Deux: Case Report of a 59-Year-Old Female With Factitious Disorder Who Was the Associate in a Shared Delusion Spearheaded by Her Daughter

Poster Presenter: Sidra Ghafoor, M.D.
Co-Authors: Jessica Elizabeth Healey, Richard Stark, Consuelo C. Cagande, M.D.

SUMMARY:
Shared psychotic disorder, also known as folie à deux, is a rare clinical syndrome that involves an ill patient, the "inducer", who transmits delusions or psychosis to another person or people who may share these in part or whole. The shared disorder often occurs in individuals who have close relationships, such as members of the same family and commonly between females. The secondary individual is usually passive, highly suggestible, and may have traits of a histrionic personality disorder. Factitious disorder is defined as a disorder wherein the patient misrepresents medical or psychiatric symptoms or even injures himself/herself without the intent to gain an external reward. Factitious disorders can also occur when one person imposes symptoms on another individual. The signs and symptoms are typically imposed by a parent on a child; however, the reverse may occur. This report describes a case of a fifty-six-year-old female patient who presented to Cooper University Hospital with progressively worsening neurological symptoms and complaints of chronic pain after sustaining injuries from chiropractic neck manipulation over twenty years ago. At her daughter's insistence, an extensive workup at multiple hospitals was performed. The daughter was constantly researching potential conditions, asking questions, and dominating conversations. Additionally, the daughter often threatened to take legal action against members of the healthcare team when they did not comply with her demands regarding the treatment of her mother. Despite an exhaustive search, no physiological basis explained the patient's symptoms. Recognizing delusional disorders that exist in patients, and potentially family members of the patients is important because of the impact on the patient's life and medical system. Although diagnoses of exclusion, delusional disorders and somatic disorders can result in prolonged hospital stays and expensive medical workups if left undiagnosed. When treating patients with these disorders, it is imperative to set strict boundaries and adhere to them. It is also important to meet with the patient on a regular basis, limit the number of medical tests performed, and educate the patient on his/her illness. This report will illustrate a unique case of factitious disorder and folie a deux as well as highlight the importance of an accurate diagnosis and educate the reader on management of these complex and rare conditions.

No. 78

HIV-Related Psychosis and the Challenge of Finding Causality for Acute Psychotic Episodes

Poster Presenter: Tarek Aly, M.D.
Co-Authors: Nauman Ramay, M.D., Asghar Hossain, M.D., Shiyao Wang

SUMMARY:
The Human Immunodeficiency Virus is associated with psychosis in a multitude of avenues. Finding causality for a newly decompensating psychosis is intensely challenging in these patients as the medications, the virus' impact on the CNS itself, and subsequent opportunistic infections may all cause psychiatric manifestations. We present a case challenge reflecting the multi-factorial assessment and management in the case of a 44 year old Mexican-American man experiencing a one day history of severe mood lability and florid psychosis. We outline the initial Emergency Room Workup, CT Scan/MRI findings, and the pertinent negative findings which eventually led to the conclusion that his psychosis was likely antiretroviral induced. As the patient's work up was slowly and meticulously gone through, the patient's behavior and psychosis continued to occur in a "waxing and waning" nature so abrupt that his unpredictability required constant observation for the majority of his stay and frequent assessment of his psychotropic regimen. We present an example of these types of acute changes in mental status as reflected in his attempt to fill out a voluntary admission form (pictured in the poster itself).

No. 79

The Switch Between Ego-Dystonic and Ego-Syntonic Thinking to Predict Decompensation in Overlapping OCD and Schizophrenic Symptoms: A Case Report

Poster Presenter: Tarek Aly, M.D.

Co-Authors: David Schwartz, M.D., Asghar Hossain, M.D., Dyman Kwarciak

SUMMARY:
It is important for clinicians to be aware of the co-occurrence of obsessive-compulsive and psychotic symptoms in order for patients to receive early identification and treatment of both disorders. The term "Schizo-Obsessional Disorder" has been referred as an area of overlap of the syndromes and we will present a case exemplifying this overlap and co-occurrence. We present the case of a 28 year old Indian-American male who was diagnosed with Obsessive Compulsive Disorder in his late teenage years which manifested as a severe preoccupation with germophobia, infection, and uncleanliness. The symptoms were ego-dystonic and the patient sought treatment to regain functioning in his daily life (school, relationships, work, etc). His symptoms were managed on first line medications (SSRIs) until the age of 26 when his obsessions and subsequent compulsions became ego-syntonic, his insight into his illness faded, and his compulsions for hand-washing excessively changed to being unable to move, sit, lay on a bed, shower, eat, or leave his home. His need to stand in order to prevent himself from coming into contact with germs/bacteria led him to develop severe bilateral lower extremity lymphadema. When stabilized, his obsessions/compulsions again became ego-dystonic and he regained day-to-day functioning. He was again seen in the local psychiatric emergency room 6 months later with a similar presentation reflecting a pattern of psychotic decompensation starting initially with a worsening of his chronic OCD symptoms. We present his assessment, course of hospitalization, stabilization and treatment regimen in order to remind clinicians on the identifiable overlap of OCD and Schizophrenia or "Schizo-Obsessional Disorder."

No. 80

The Man Who Lost His Memory and Personality: A Case of Frontotemporal Degradation and the Challenging Aspects Therein

Poster Presenter: Tarek Aly, M.D.
Co-Authors: Javeria Sahib Din, Asghar Hossain, M.D.

SUMMARY:
Frontotemporal dementia (FTD) is a divergent group of neurodegenerative conditions. It is a prevailing cause of young-onset dementias and remains a challenging diagnosis for physicians due to its overlapping characteristics with other psychiatric and neurologic illnesses. It is characterized by the progressive atrophy involving the frontal and the temporal lobes, which may present in a multitude of varying presentations. Of them includes "Behavioral Variant FTD," leading to severe behavioral changes. Among the behavioral symptoms, the earliest symptom to appear is a personality change5. Altered eating habits, apathy, disinhibition, emotional blunting, obsessive symptoms etc. are next5 to appear. Sexual inappropriateness is common in FTD. The symptoms which are least to be seen in bvFTD are hallucinations and aggressive behavior. We present the case of a 59 year old Hispanic male with a sudden change in personality and a 6 month history of severe cognitive decline who presented to the local psychiatric emergency room after being found wandering next to a local bridge. He presented with critically severe memory loss, being unable to recall his name, where he lived, or any other vital information. After medical clearance, a CT scan of the brain indicated unique frontal and temporal degradation of the brain. We present his challenging clinical management, unique presentation, and stabilization during his course of hospitalization.

No. 81

Dual Cases of Topiramate-Induced Hair Loss

Poster Presenter: Tarek Aly, M.D.
Co-Authors: Sameerah F. Akhtar, M.D., Zohaib Majid, Shabber Agha Abbas, Asghar Hossain, M.D.

SUMMARY:
The association of anti-epileptic medication with resultant alopecia is frequently reported especially relative to valproic acid and carbamazepine use. Topiramate, a second-generation anti-epileptic, is highly effective in the treatment of seizure disorders and for the prophylaxis of migraine headaches. It has also shown promise for the treatment of bipolar disorder, obesity, and anti-psychotic-induced weight gain. Topiramate side effects are mainly central nervous system related including dizziness, somnolence, psychosis, cognitive impairment, word-

finding difficulties, and weight loss. Till date, alopecia has only been anecdotally reported as an adverse effect of topiramate bipolar therapy. Hair loss, and in particular alopecia, can have significant cosmetic impact and psychosocial effects in children and in young adults. Drug-induced hair loss is characterized as diffused, non-scarring and is usually reversible with drug cessation. We report on two cases where patients developed alopecia following topiramate dose escalation of similar ages, symptoms, and response to improving the hair loss.

No. 82

The Importance of Early Recognition of Depakote-Induced Pancreatitis in the Acute Hospital Setting

Poster Presenter: Tarek Aly, M.D.
Co-Authors: Nauman Ramay, M.D., Asghar Hossain, M.D., Shiyao Wang

SUMMARY:

Pancreatitis associated with the use of valproic acid has been a well documented complication and adverse event that can be life threatening to patients of both psychiatry and neurology. The diagnosis of the pancreatitis is made in the clinical setting via the classical signs and symptoms of the syndrome (epigastric abdominal pain, nausea, vomiting, abdominal distension, fever, malaise, etc). There are a plethora of articles and case reports published, further establishing the classically taught association between the medication and the syndrome, however a further emphasis needs to be placed on how effective monitoring, communication, and thorough physical examination can lead to a life-saving intervention. We present the case of 41 year old Caucasian male with an extensive, life-long history of hypomanic symptoms presenting with severely decompensating symptoms of mania. During his first admission, he was stabilized on a regimen of only Risperidone. He was stabilized on the acute involuntary unit of Bergen Regional Medical Center and later discharged. He returned to the ED within 2 weeks with a resurgence of his manic symptoms. At this time, he was started on a regimen of Valproic Acid and Risperidone. Approximately 24 hours after starting the medication the patient developed the classic signs and symptoms of pancreatitis. Due to effective communication between the emergency department senior resident, admitting psychiatric intern on the hospital floor, and medical team attending, the syndrome was diagnosed, addressed, and managed appropriately.

No. 83

Psychostimulant Abuse in the Schizophrenic Patient: A Case Report

Poster Presenter: Tarek Aly, M.D.
Co-Authors: Asghar Hossain, M.D., Syed Saleh Uddin, M.D.

SUMMARY:

Cognitive decline and negative symptomatology is a life altering and debilitating feature of Schizophrenia that has been well described historically. Though the relationship between substance abuse and schizophrenia is a multifactorial amalgam of complex causality vs. correlation, psychostimulant abuse would logically be a potential danger to address the cognitive decline of the disease itself. Stimulants, themselves, are one of the most abused drugs in the USA, often assessed to be the second most common type of prescription medicine abused. Stimulant abuse therein can lead to psychotic symptomatology when abused, and in an already schizophrenic patient, the assessment, treatment, and stabilization is challenging. We present the case of a 26 year old Korean ex-law student with a history of schizophrenia and recent diagnosis of stimulant use disorder presenting to the local psychiatric emergency room after substance-oriented intervention prevented him from easy access to regularly prescribed psychostimulants. He subsequently ordered psychostimulants derived from these regularly prescribed medications from overseas retailers in Russia. He began abusing Adrafinil (prodrug of Modafinil) and Phenylpiracetam as a powdered form for approximately 1 week in unspecified amounts.. He began to experience severely decompensating psychosis including visual, auditory and tactile hallucinations as well as persecutory delusions and severe mood lability. We present the initial assessment, management and stabilization of this patient.

No. 84

An Anti-GQ1b Syndrome With Persistent Psychiatric Symptoms

Poster Presenter: Forhad Ullah

Co-Authors: Catherine Velupillai, Douglas Opler, M.D.

SUMMARY:
Background: Anti-GQ1b antibody is found in Miller Fisher Syndrome (MFS), a subtype of Guillain Barre Syndrome (GBS). GBS causes ascending muscle paralysis. MFS is an acute idiopathic polyneuritis that causes ophthalmoplegia, ataxia, and loss of tendon reflexes. The similar Bickerstaff Brainstem Encephalitis (BBE) is also associated with anti-GQ1b. BBE is similar to MFS, but includes brainstem encephalitis. It is unclear if BBE is a separate entity or a variant of the same process. However, in anti-GQ1b syndromes, patients are not known to have persistent psychiatric symptoms. We present a rare case of anti-GQ1b syndrome with persistent psychiatric symptoms. Case Report: A 33 year old woman with anti-GQ1b brainstem encephalitis was admitted for facial abscess. Psychiatric consultation was requested to evaluate her behavior and decision-making capacity. History revealed that 2 years ago, she was highly functional and worked as a bus driver with no physical or psychiatric symptoms until she was first hospitalized for 2 weeks of lethargy and apathy. At that time, she would intermittently respond to questions and became bedbound. MRI without contrast at that time showed T2 hyperintensities in midbrain, pons, basal ganglia, genu of the corpus collosum, and medial temporal lobes with patchy enhancement in basal ganglia. LP showed lymphocytosis. Anti-NMDA and anti-GQ1b were initially negative. Diagnosis of autoimmune brainstem encephalitis was made based on MRI. She deteriorated and stopped responding. With IV methylprednisolone and plasmapheresis, she improved and was discharged to a rehabilitation facility. Repeat labs revealed anti-GQ1b. Over the 2 years since presentation she was hospitalized for multiple episodes of poor oral intake and aggression. Her mother reported that she is angry, steals from the home, and invites strangers over. During this hospitalization, she was selectively mute, often communicating via hand gestures, yet intermittently spoke clearly, stating that she does not know why she misbehaves. Admission labs revealed hemoglobin of 9.5 g/dL and potassium of 3.2 mmol/L (corrected with PO potassium). Urinary toxicology screen was negative for drugs. Patient was started on antibiotics for her dental abscess and quetiapine 25 mg PO BID for her impulsivity. She was discharged to outpatient psychiatric care.
Discussion: MFS and BBE present with ophthalmoplegia, ataxia and loss of tendon reflexes. BBE, as in this patient, also includes brainstem encephalitis. Both MFS and BBE are anti-GQ1b with similar neurological manifestations. Patients with GBS often have acute hallucinations, vivid dreams, and anxiety, yet these psychiatric symptoms tend to resolve in days. Long term psychiatric issues have not previously been reported in these syndromes, which makes this case remarkable. Little is known about long term consequences of anti-GQ1b syndromes. This case adds to the body of knowledge on psychiatric sequela of these syndromes.

No. 85

Management of TBI-Induced Psychosis of Epilepsy With Anticonvulsants as Long-Term Monotherapy

Poster Presenter: Gayatri Baker

SUMMARY:
Management of Psychosis of Epilepsy following Traumatic Brain Injury with Anticonvulsants as Long-Term Monotherapy. Author Gayatri Baker, D.O. Abstract K.A. is a 20-year old Caucasian female with no previous psychiatric history presenting to outpatient urgent care clinic with new onset auditory hallucinations. She describes hearing multiple voices conversing with one another and belonging to unknown individuals. The voices are occasionally commanding in nature and patient reports that they instruct her to not consume food or trust others. Symptoms began 1 week ago and were preceded by insomnia, anxiety, racing thoughts and diminished appetite. With further evaluation of patient's history, it is revealed that she incurred head trauma during a MVA 6 months prior. She notes that in the weeks following the MVA, she also experienced progressive blurred vision. Following the MVA, she received no medical attention as she reported that she was inebriated at the time and was fearful of legal consequences. Patient was unable to contract for her personal safety due to progressively worsening features of anxiety in the context of new onset auditory hallucinations. Patient was hospitalized to undergo further evaluation and management. Initial laboratory work up returned normal. EEG was abnormal and demonstrated

epileptiform focus overlying the temporal region suggestive of simple focal seizure activity. Symptom chronology and onset after incurring TBI point toward psychosis of epilepsy rather than primary psychosis of schizophrenia. Had proper history not been acquired at the time of admission, the patient could easily have been diagnosed with Schizophrenia and treated incorrectly with antipsychotics alone, rather than in combination with an antiepileptic. In this poster, the challenges and importance of proper evaluation and simplified treatment approaches in the management of psychosis of epilepsy (POE) are discussed in detail. The outcomes of this case demonstrate that prognosis can be improved if treatment is focused on underlying cause rather than control of overt psychotic symptoms.

No. 86

New-Onset Obsessive-Compulsive Disorder and Subacute Cerebellar Stroke

Poster Presenter: Jacob Joseph Oyer, M.D.
Co-Authors: Rebecca A. Olufade, M.D., Walter Kilpatrick

SUMMARY:

Background: Cerebellar Cognitive Affective Syndrome (CCAS) refers to a constellation of deficits in the domains of executive function, spatial cognition, language, and affect resulting from damage to the cerebellum. For patients, these deficits range widely in type, duration and severity, and may include an increase in obsessive thinking and/or compulsive behavior. We present the case of a 30-year-old man who developed a new-onset Obsessive-Compulsive Disorder (OCD) in close temporal proximity to a subacute cerebellar stroke. **Methods:** An exhaustive Pubmed and Medline search was performed to explore clinical characteristics, pathophysiology, and potential treatments of CCAS, as well as the relevant neurobiology involved in OCD. Lastly, we explored other documented neuropsychiatric manifestations of cerebellar pathology. **Results:** A 30-year-old man, diagnosed 4 weeks previously with new-onset OCD, and 2 weeks previously with subacute cerebellar stroke secondary to antiphospholipid antibody syndrome, presented to our emergency department with complaint of abdominal pain and hematuria. During hospitalization, Psychiatry consulted for evaluation and management of extreme distress around obsessional fears (e.g., that he may contract HIV from unclean surfaces, develop cancer, or become a pedophile) and compulsive behaviors (e.g., hand-washing) that he reported had become more frequent and intrusive over the past several weeks. His evaluation was part of a multidisciplinary effort involving workup by Medicine, Neurology, Surgery and Hematology. Review of MRI brain from outside hospital showed multiple small areas of infarction in the posterior lobe of the left cerebellar hemisphere. Psychiatric evaluation found no other evidence of current mental health issues; past history was significant for long-term issues with untreated generalized anxiety. GI pain and hematuria were determined to be secondary to bleeding associated with his coagulation disorder. He was treated with escitalopram with good effect on follow-up. Original studies of CCAS describe multiple patients with new-onset obsessions, compulsions, and stereotypies. Literature review reveals at least one similar case involving a 52-year-old woman who developed new-onset OCD in the setting of arachnoid cyst in the left-side, posterior cerebellum. Structural MRI studies have consistently shown volumetric differences in several cerebellar regions (left Cruz I, left IV, right VI, and Vermis VI) between OCD patients and healthy controls. Functional MRI studies have also shown altered connectivity between cerebellar, neocortical, and limbic regions in OCD patients. **Discussion:** Cerebellar damage may cause new or worsening deficits in multiple cognitive and affective domains. Symptoms may present as new-onset psychiatric illness such as OCD, and fall within the greater domain of CCAS. This is supported by multiple studies highlighting the role of the posterior cerebellum in cognitive and affective modulation, and is in accord with the concept of cognitive or affective “dysmetria” in posterior lobe damage, analogous to the motor dysmetria resulting from damage to the frontal lobe. **Conclusion:** It is important for psychiatric providers to recognize the neuropsychiatric consequences of cerebellar injury. Cognitive, affective and behavioral changes may occur in patients with lesions involving the posterior lobe of the cerebellum, and may overlap with a variety of DSM 5 depressive, anxiety and autism spectrum disorder. Successful management has

involved use of SSRIs, antipsychotic agents, and neuropsychological rehabilitation programs.

No. 87

A Case of Delayed Post-Hypoxic Leukoencephalopathy in a Catatonic-Appearing Patient

Poster Presenter: Jordan Lea Gaal, D.O.
Co-Author: Meredith Lee Bentley, D.O.

SUMMARY:

Objective: To broaden the differential diagnosis for catatonic-appearing patients lacking typical improvement with benzodiazepines to consider delayed post-hypoxic leukoencephalopathy. Introduction: Catatonia is a neuropsychiatric syndrome characterized by the presence of cognitive, motor, speech, and behavioral symptomatology. Mutism, staring, posturing, and catalepsy are some of the most well-known signs but clinical presentation varies dramatically. Various scales, such as the Bush-Francis Catatonia Rating Scale, help gauge severity and assist with diagnosis. Treatment is most often with a benzodiazepine. It is well known that other conditions such as akinetic mutism, status epilepticus, locked-in syndrome, and stroke may mimic catatonia. Differentiating catatonia from other conditions requires careful history, examination, and selected laboratory or neuroimaging findings. Delayed post-hypoxic leukoencephalopathy (DPHL) is a syndrome of cerebral demyelination following hypoxic brain injury. After the initial hypoxic event, there is a non-sustained return to baseline function lasting days or weeks but is ultimately characterized by rapid decline in neurobehavioral function. For some patients, the clinical presentation is primarily parkinsonian but others display symptoms consistent with akinetic mutism. Establishing the diagnosis can be a challenge due to the delayed nature of symptom onset and limited laboratory and neuroimaging options early in the course of illness. Magnetic resonance imaging (MRI) is often normal upon hospital admission but reflects leukoencephalopathic changes later in the disease process. Either subtype of DPHL has high symptom overlap with other more commonly encountered clinical conditions and diagnosis requires a high index of suspicion. We present a case of DPHL presenting with akinetic mutism originally misdiagnosed as catatonia. Case: A 50 year-old with history of depression was found unresponsive, hypoxic, and febrile in her home for unknown duration. Computed tomography (CT) of the head and MRI of the brain were initially normal. Liver function tests, amylase, and lipase were elevated and acute pancreatitis was suspected. Once stabilized, her cognition improved to baseline. Ten days into hospitalization, her condition deteriorated until she displayed symptoms of mutism, stupor, staring, decreased oral intake, and perseveration. Catatonia secondary to major depressive episode was suspected. Lorazepam was started and titrated upward without result. Lack of response to lorazepam prompted repeat MRI of the brain, revealing diffuse white matter changes in frontal, temporal, parietal, and occipital lobes. DPHL was diagnosed. Conclusion: Delayed post-hypoxic leukoencephalopathy should be considered for patients with catatonia-like symptoms who do not respond to a trial of lorazepam and whose presentation involves a hypoxic event with return to baseline cognition and then followed by neurobehavioral decline.

No. 88

ECT to Treat Psychosis in a Patient With Severe TBI

Poster Presenter: Julia F. Jacobs, M.D.
Co-Authors: Christopher W. Harris, D.O., Ryan Bradford King, M.D.

SUMMARY:

This is a report of a 47 year old former Marine admitted to an inpatient neuropsychiatry unit with three weeks of new onset, progressively worsening episodic paranoia and depersonalization seven years after sustaining a severe traumatic brain injury (TBI). The patient had no personal history of psychiatric disorders prior to his severe TBI in 2010 due to an ATV accident. However, he had a history of multiple mild and moderate TBIs from combat. The worst was in 2007 and was complicated by central hypoandrogenism, hypothyroidism, and hypocortisolism. The hypothyroidism and hypocortisolism ultimately resolved. After his severe TBI in 2010, the patient reported anosmia, two episodes of tonic-clonic seizure: one in 2009 and one three months prior to admission. Additionally, he

had one prior psychiatric hospitalization in 2015 for depressed mood, irritability, and suicidal ideation where he was diagnosed with a mood disorder due to a known physiological condition. Since that admission and subsequent discharge in 2015, his symptoms were well controlled with lamotrigine 250 mg BID, bupropion 300 mg daily, and regular psychotherapy. At the time of this admission, the neurologic exam was positive for chronic anosmia and subtle left-sided difficulty with rapid alternating movements. The mental status exam was notable for presence of paranoid delusions characterized by suspicion that others were talking about the patient or wanted to kill the patient leading to debilitating panic attacks. Laboratory values were only notable for chronic low testosterone. MRI showed a left inferior frontal contusion with encephalomalacia and gliosis consistent with prior TBIs. Spot EEG showed one epileptiform spike in the frontal lobe, while continuous EEG did not show epileptiform activity associated with episodes of paranoia. Lamotrigine was increased to 300 BID for increased mood stabilization and antiepileptic effects. The patient then underwent 7 ECT treatments with dramatic improvement in his symptoms. He was discharged with scheduled outpatient ECT and psychiatric follow up. This case illustrates an evolving mood disorder with new onset psychotic features arising seven years after TBI. Additionally, it demonstrates the efficacy of ECT for the treatment of psychotic features in the context of a severe TBI. Finally, it emphasizes the importance of medical providers' awareness of the possible long-term psychiatric sequelae of TBI.

No. 89

Unique Challenges Faced by Male Patient With X-Linked Adrenoleukodystrophy in the Forensic Mental Health Care System

Poster Presenter: Kim Fielding
Co-Author: Simon S. Chiu, M.D., Ph.D.

SUMMARY:
B.B, a 25 year old Caucasian male, was diagnosed, along with his twin brother, with X-linked adrenoleukodystrophy (ALD) in early childhood. He presented to the Forensic Mental Health Care System in 2016 with a five year legal history including multiple charges for sexual assault, uttering threats, theft, possession of illegal substances, and harassment. His psychiatric presentation included symptoms of psychosis with delusional thinking, significant mood lability, impulsivity, verbal and physical aggression and sexual disinhibition. He was initially admitted under a Treatment Order after being found Unfit to Stand Trial. Despite multiple medication trials including the use of anti-psychotics and mood stabilizers, B.B. remained Unfit to Stand Trial and was placed under a Detention Order by the Ontario Review Board. He remains in a seclusion room at the forensic psychiatric hospital due to ongoing impulsivity and sexualized behaviours. He is deemed to be a significant risk to others due to his continued aggression and poor judgment, which is thought to be secondary to his ALD. Although B.B. previously used substances including crystal methamphetamine, this is not a current contributor to his presentation given his prolonged admission and lack of access to illicit substances. At this time, there are no community placements available that would be suitable for the level of care and supervision that B.B. requires. During the course of his admission, he experienced his first epileptic seizures, which were ultimately attributed to progression of his ALD. B.B. remains capable to consent to treatment, but requires assistance with eating and bathing due to significant restlessness and distractibility. In this poster, we review the various phenotypes associated with ALD and, in particular, the psychiatric manifestations of this illness. To our knowledge, this is the first case report of ALD presenting as psychosis, on a background of ADHD, substance use disorder and violent criminal behaviour. We also explore the unique challenges faced by patients with a neurodegenerative illness in the Forensic Mental Health Care System, for which treatment is limited and prognosis remains guarded. The findings also call into question whether genetic data is admissible as evidence in criminal court proceedings. Ethical issues in the context of palliative forensic psychiatry will be discussed, including the interplay between criminal culpability and therapeutic jurisprudence in the context of irreversible incompetency to stand trial.

No. 90

Aggressive Screening for Anti-NMDA Receptor

Encephalitis? A Case Report of a Nonspecific Psychiatric Presentation Leading to a Delay in Treatment

Poster Presenter: Lauren Solometo, D.O.
Co-Author: Marie Lyse Turk, M.D.

SUMMARY:

Despite the growing body of literature surrounding Anti-N-methyl-D-aspartate receptor (anti-NMDA-R) encephalitis, this disease remains challenging to diagnose, particularly in the absence of a prodromal headache, fever, or viral-like process. Readily available imaging, laboratory, and exam findings are non-specific. The diagnosis is confirmed by CSF and serum antibodies to the NR1 (also known as GluN1) receptor, testing which is not available at many institutions and requires a minimum of several days for results to return. Delay in diagnosis is thought to lead to worsened morbidity and mortality. We report the case of a 27-year-old female with a past psychiatric history of obsessive-compulsive disorder and no past medical history who was transferred from an outside psychiatric facility to the neurology service for management of progressive psychosis, with suspicion for limbic encephalitis. Psychiatry was consulted for assistance with determining the nature of her psychotic symptoms given the limited definitive evidence to suggest limbic encephalitis. Further workup was significant for positive plasma NR1 antibodies, which resulted several days after admission to our facility. In total, her treatment was delayed for approximately one month from the onset of psychosis. This case illustrates the challenges in diagnosing anti-NMDA-R encephalitis in the absence of the characteristic syndrome and specific laboratory findings. Further research about the underlying disease process is needed in order to optimize screening and prevent delays in treatment.

No. 91

A Case of Psychosis and Capgras Syndrome Following an Intracerebral Hemorrhage of the Right Basal Ganglia

Poster Presenter: Michele Vargas, M.D.

SUMMARY:

The patient is a 56 year-old African American man without previous psychiatric history and a medical history notable for poorly controlled diabetes mellitus 2 and hypertension, cerebellar ischemic stroke, and recent hemorrhagic stroke of the right basal ganglia complicated by seizures who presented to the psychiatric consult service with behavioral changes. He had recently visited his primary doctor who initiated therapy with sertraline (Zoloft) for irritability and aggression. Following his hemorrhagic stroke, the patient remained preoccupied with thoughts that his wife was being unfaithful and that his home was being invaded. He also developed an inability to identify his wife, often believing that she was an imposter, consistent with a diagnosis of Capgras Syndrome. He became increasingly aggressive, throwing objects around the home and threatening family members with knives. The psychiatry team attributed his symptoms to levetiracetam (Keppra) induced psychosis as the timeline coincided with the initiation of this medication. Recommendations were made to discontinue levetiracetam in favor of valproic acid (Depakote) for seizure prophylaxis, and the patient was discharged after an overnight observation on the neurology floor. He returned to the emergency department several days later after again threatening his daughter with a butcher knife. The patient was then admitted to the psychiatry service for management of post stroke psychosis which gradually improved with the addition of an antipsychotic medication. This case illustrates the importance of early detection and treatment of psychotic symptoms that emerge subsequent to a brain insult. It also demonstrates that the location and type of stroke strongly influences behavioral presentations, and provides a possible localization in the brain for the etiology of Capgras syndrome.

No. 92

Clinical Profile of a Male With Xenomelia and Intense Desire to Amputate a Healthy Leg Perceived as Alien to His Body

Poster Presenter: Mihir Ashok Upadhyaya, M.D., Ph.D., M.P.H.

SUMMARY:

Xenomelia, literally meaning “foreign limb,” is a neuropsychiatric condition in which apparently non-psychotic individuals have an intense, persistent belief one or more of their limbs does not belong to their body; instead they regard it as an alien

appendage that should be discarded. This unwavering fixed belief resembling a delusion is often debilitating to the point where the affected person strongly desires amputation of the unwanted limb. Traditionally, such a request is often denied by the medical community, causing some who suffer from the condition to attempt risky self-amputation, or to injure the limb in a manner that makes subsequent amputation medically necessary. (Upadhyaya & Nasrallah, 2017) The name for this condition has evolved over the years, depending on the emphasis given to certain of its characteristics. It was once called apotemnophilia, meaning "love of amputation," when the condition was thought to be a fetish involving sexual gratification derived from being an amputee. (Sedda, 2014) The term "body integrity identity disorder" (BIID) was introduced several decades later to incorporate it into a broader spectrum of accepted psychiatric pathologies, reasoning the condition was the cause of a mismatch between objective and subjective body schema, similar to anorexia nervosa or body dismorphic disorder. (Blom, 2012) However, unlike these other disorders, individuals with this condition have sufficient factual insight to know they appear "normal" to others. The newest term, xenomelia, was established to acknowledge the neurological component of the condition, after neuroimaging studies showed structural changes to the right parietal lobe of afflicted individuals who desired amputation of their left lower limb, thus linking the part of the brain that processes sensory input from the affected limb. (McGeoch, 2011) While particular nuances in symptomatology were modified in formulating these names, certain hallmark features have always remained the same. (Nowakowski, 2016) (1) It is established that the condition starts in early childhood, prior to puberty. (2) Those who suffer from it feel intense distress, and are resigned to the notion that nothing else can alleviate their condition except for amputation. (3) It is overwhelmingly more common in males than females. (4) It is accompanied by non-traditional attitudes about disability, with admiration of amputees and complete apathy and disregard toward the impairment that amputation would cause. While there are insufficient numbers to say it with complete confidence, the trend in the published literature would suggest that the lower left limb is predominantly the one implicated in the condition, in right-handed individuals. (Upadhyaya & Nasrallah, 2017)

No. 93

An Unusual Case of Arnold-Chiari Malformation Type I Associated With Psychosis

Poster Presenter: Miriam Quinlan
Co-Author: Sarayu Vasan, M.D., M.P.H.

SUMMARY:
INTRODUCTION & OBJECTIVE: Arnold Chiari Malformation (ACM) is a congenital brain anomaly characterized by herniation of cerebellar structures through the foramen magnum. Often, the diagnosis is a challenging one as presentations can vary from no symptoms to a wide variety of symptoms, and the manifestations can often be associated with other neurological and psychiatric conditions. To date, there is a paucity of literature pertaining to psychiatric illnesses associated with ACM. CASE PRESENTATION: After a comprehensive chart review, we report the case of a 34-year-old Hispanic male with Type I Arnold-Chiari Malformation and significant past medical history of psychosis, schizoaffective disorder, and severe bilateral visual impairment secondary to glaucoma. This unusual case highlights how ACM can be associated with psychosis. DISCUSSION: In assessing the overall quality of life and psychiatric morbidity in patients with ACM-I, researchers have found a psychiatric condition serves to affect not only the patient's physical health but also serves to damage the psychological, social, and environmental aspects of health. It is our aim to highlight how integral it is in psychiatric clinical practice to continue to investigate the patient globally and further, to investigate the neuropsychiatric implications of ACM. CONCLUSION: This case illustrates how the presence of a psychiatric syndrome in patients with overlapping neurological disease can serve to alter a symptom pattern, or delay a diagnosis, and therefore compromise identification and treatment for both conditions. Psychiatric symptoms should be explored in ACM patients to allow better detection of psychosis and anxiety disorders. Continual efforts should be made in order to investigate the neuropsychiatric associations of ACM, as they are

essential in improving both patient experiences and outcomes.

No. 94

Inpatient Treatment Challenges: Patient With Schizophrenia Who Develops Lewy Body Dementia

Poster Presenter: Monika Gashi, M.D.
Co-Authors: Luisa S. Gonzalez, M.D., Kyle Andrew Mihaylo

SUMMARY:

Lewy Body Dementia affects 1.3 million Americans. (1) It accounts for 15% to 35% of dementia cases, which is easily confused with Alzheimer's dementia that is the most common type of dementia due to old age. (2) When a diagnosis of Lewy body dementia is delayed or incorrect, inadequate treatment can increase the patients morbidity and mortality. The overlap or lack thereof of cognitive, psychotic, and motor symptoms often makes diagnosis confusing. During an psychiatric inpatient admission, treatment of the medical comorbidities, can be challenging and can potentially lead to increase in length of stay. We present a case of a 73 year old patient with a long history of schizophrenia who had been evaluated on multiple occasions at the emergency department (ED) for over a year prior to her psychiatric inpatient admission. She would present to the ED with paranoid symptoms, auditory and visual hallucinations, cognitive decline, and bizarre behavior which had been different from her previous admissions. After a prolonged length of stay, extensive laboratory, imaging studies, and several patient encounters, the patient was finally diagnosed with Lewy Body dementia and appropriate treatment initiated. This poster aims to demonstrate the importance of early recognition of the Lewy Body Dementia (LBD) symptoms when a patient presents to the emergency room with atypical presentation. A review of the psychiatric presentations , treatment trials, and potential guidelines that can be utilized in a collaborative effort between different disciplines to facilitate care and minimize the length of stay on inpatient service will be presented.

No. 95

Cognitive Dysfunction as Initial Neuropsyhchiatric Presentation of Multiple Sclerosis

Poster Presenter: Nazneen Shakeel, M.B.B.S.

SUMMARY:

Multiple sclerosis (MS) is the most common and disabling disease of the central nervous system affecting young and middle-aged adults, with a reported age of onset between 20 and 40 years. Although much of the burden of the illness is recognized as neurological, neuropsychiatric symptoms are sequelae of this debilitating disease. Cognitive impairment is a common phenomenon occurring in 53% to 65% of patients and varying from relatively mild to rarer presentations that might appear as dementia. It is unclear if severe cognitive impairment in a young adult can represent the first presenting neuropsychiatric symptom of MS. Most of the neurological deficits in MS are attributed to white matter lesions. In more recent times, particularly with advances in neuroimaging, gray matter pathology has been considered as a more plausible explanation for cortical deficits in MS. It has been noted that cognitive problems can be present when the neurologic examination does not identify deficits. On occasions, neuropsychiatric symptoms have been the initial reasons patients seek clinical attention. Methods: We reviewed the literature and could not find clear cases of cognitive impairment as a presenting neuropsychiatric symptom of MS. Results: We present a case of a 28 year old single male. Five years prior to presenting to our clinic, the patient was taken to a local mental health center for forgetfulness and falling spells with no prior medical or psychiatric illness. He was diagnosed with schizophrenia after reporting auditory hallucinations. He received treatment with risperidone for one year. He continued to follow up at the local mental health center, from where he was referred to a University Neurology Clinic for "evaluation of memory problems and seizure-like spells". During the neurological work up the patient was referred to psychiatry ambulatory service for neuropsychiatric evaluation. Extensive neurological work up revealed a diagnosis of Multiple Sclerosis while the follow-up assessment at our psychiatry clinic revealed the patient to have significant cognitive impairment. The case presented is used to highlight the cognitive dysfunction of a severe type determined by neuropsychiatric, neuropsychological testing, neurologic and neuro-imaging techniques

detected in this patient. The possible clinical correlations with evaluative findings and known neuroscience knowledge as well as possible management options are also presented, with suggestions for future studies. Conclusions: This case presents a diagnostic dilemma for practicing psychiatrists evaluating such patients with a complex neuropsychiatric presentation. Psychiatrists face challenges in the management of such patients given the limited treatment options for dementia or "dementia-like" deficits.

No. 96

Conversion Disorder? … Think Again!

Poster Presenter: Nicole Abbot, M.B.B.S.
Co-Author: Kathy M. Bottum, M.D., Ph.D.

SUMMARY:

Introduction: Conversion Disorder (CD) is a syndrome of neurological symptoms with no proven organic cause. Despite advances in imaging studies, the diagnosis of CD is largely clinical and remains a diagnosis of exclusion. Case Presentation: 56 yr old lady with history of rheumatoid arthritis, hypothyroidism and migraines, but no psychiatric history, developed sudden onset of expressive aphasia and right sided numbness and weakness. Brain imaging was normal. Family declined TPA since symptoms started to improve. Aphasia persisted and a repeat MRI and LP was done which were normal. Psychiatry diagnosed her with CD, and commenced alprazolam, citalopram and aripiprazole. She was admitted readmitted one week later with continued aphasia and new onset left visual field defect. Brain MRI showed pachymeningeal enhancement, EEG showed no epileptiform waves, and second LP was done with CSF autoimmune panel, 14-3-3 protein, T-Tau protein, RT-QuIC all negative. Aphasia improved but incompletely and she was discharged. Eight days later she was readmitted with confusion, agitation, and visual and auditory hallucinations. Physical exam was significant for left visual neglect and new cognitive impairment. Repeat EEG showed triphasic waves. Valproic acid was started for presumed seizure activity. Consult liaison team diagnosed delirium, and treated with PRN haloperidol. Aripiprazole was later stopped, citalopram and valproic acid were tapered. She was treated with methylprednisolone, followed by IVIG for presumed autoimmune encephalitis. Cerebral angiogram did not show evidence of vasculitis. Her cognition and neglect improved and she was discharged to rehab. Follow up MRI brain showed focal T2 flair abnormalities. Brain tissue was biopsied and showed proliferation of ganglion cells in a background of nonspecific reactive changes. Discussion: Misdiagnosis of CD after extensive investigation is thought to be uncommon. CD is diagnosed more in female gender and comorbid psychiatric illness. Lack of a clear neuro-anatomical pathway to explain presentation or a lack of supporting neuro-imaging, are often attributed to CD, which DSM-5 cautions against. In our case, lack of acute psychological stress, psychiatric history and comorbid autoimmune disorder suggested an alternative diagnosis. Current literature recommends avoiding repeated imaging however, this revealed the evolution of a pathological process. Advances in fMRI demonstrate abnormalities in motor and sensory cortices, the limbic system and ventromedial prefrontal cortex in patients with CD. This challenges the theory of a purely psychogenic etiology for CD. Future research should lead to better understanding and management of CD. Conclusion: CD is a diagnosis of exclusion and should be considered with less haste in the acute care setting. Continued follow up is essential to avoid misdiagnosing a neurological disorder.

No. 97

Anti-NMDA Receptor Encephalitis in a Patient With a History of Autism Spectrum Disorder

Poster Presenter: Xavier Yang Diao, M.D.
Co-Author: Milana Mor, M.D.

SUMMARY:

OP is a 16-year-old male with a past medical history of mild persistent asthma and a psychiatric history of attention deficit hyperactivity disorder and autism spectrum disorder who presented with a 3-day history of acute-onset altered mental status, seizures, and slurred speech. His brain MRI was unremarkable but EEG was significant for epileptiform discharges. Laboratory studies were significant for with serum- and CSF-positive NMDA antibodies, with a serum NMDA IgG titer of 1:2,560. Imaging including thyroid and testicular ultrasounds, as well as CT scans for chest, abdomen, and pelvis,

were all negative for occult malignancy. The child psychiatry consult-liaison service was consulted for significant agitation and behavioral dyscontrol. At that time, the patient was status post intravenous methylprednisolone, 3 days of intravenous immunoglobulin, and 2 infusions of rituximab, without significant clinical improvement. We recommended 1:1 observation for safety, quetiapine titrated by 50mg daily to clinical effect, clonazepam 3mg TID, and trazodone 50mg qHS for sleep. Intramuscular chlorpromazine 25mg TID prn was also added for acute agitation. The patient had a protracted hospital course, complicated by multiple episodes of agitation initially refractory to low-dose antipsychotics and decreased oral intake requiring a percutaneous endoscopic gastrostomy tube for enteric nutrition. Eventually, the patient defervesced to fewer episodes of agitation, relative resolution of his encephalopathy, and improved nutritional status. He was subsequently discharged to an acute rehabilitation facility for continued stabilization and therapy. Here we demonstrate a case of anti-NMDA receptor encephalitis in a patient with autism spectrum disorder. There is ongoing literature to suggest that patients with ASD have evidence of neuroinflammation—or by definition, encephalitis. It remains to be seen if the relation between encephalitis and ASD is uni- or bidirectional, that is: whether children with ASD have a genetic diathesis to developing encephalitides (such as those mediated by the NMDAR), or conversely, if deranged or inflamed neuroreceptor processes are implicated in the development of ASD. Further research is thus critical to developing targeted therapies for NMDAR encephalitis in patients with comorbid ASD, as well as for NMDAR encephalitis in neurotypical patients without a discrete focus for autoimmunity and molecular mimicry, i.e. ovarian or testicular teratomas.

No. 98

When Mood Swings Mean So Much More in the Oldest Surviving Case of ROHHAD Syndrome

Poster Presenter: Zohaib Haque, M.D.

SUMMARY:

Mr. C is a 23-year-old Hispanic Male with a past medical history of ROHHAD syndrome (Rapid-onset Obesity, Hypoventilation, Hypothalamic Dysfunction, and Autonomic Dysregulation), stroke at age 10 that left him quadriparetic, a Neuroendocrine tumor of the spinal column removed at age 12, pancreatitis, ARF, and osteopenia who presented to our outpatient clinic for “mood swings” and increasingly repetitive speech and confusion all displayed over the last 10 months. Before we could obtain prior records and new imaging studies for his follow-up visit he presented to the ER two weeks later with a seizure-like episode, and given his persistently altered mental status and inherent medical complexity he was admitted to the ICU. The differential diagnoses in considering this patient’s management were new-onset epilepsy, a cerebrovascular accident, metabolic abnormalities (both inherent and medication-induced), or a new sequela of his existing chronic medical condition. Mr. C’s tumultuous twelve-day hospital stay allowed us to monitor his symptoms and behavior during various stages of treatment, thus giving us a more comprehensive understanding of his complicated illness. In conjunction with the Neurology and Endocrinology team we decided to treat the patient with Levetiracetam for its lack of cross-reaction to the patient’s numerous medications, it’s anti-epileptic profile, and its mood stabilizing potential. On outpatient follow-up, the patient’s behavior and confusion have improved, and his epilepsy is well controlled as well. There are only about 150 reported cases of ROHHAD in the world with the vast majority of those afflicted dying in early adolescence, this makes our case unique and pertinent to the continuing care and survival of this patient population. Current ROHHAD research is primarily focused on determining the etiology of ROHHAD, whether they are epigenetic or autoimmune, and the best modalities of treatment in early childhood. This poster will discuss the various obstacles we faced in differentiating potential psychiatric etiologies from medical causes for his altered mentation and behavioral changes in an adult ROHHAD patient.

No. 99

Using Aloe Vera to Treat Seizures: A Case Study

Poster Presenter: Nina Jaffarzad, M.D.
Co-Author: Kathleen A. Crapanzano, M.D.

SUMMARY:

Interictal psychotic phenomena, particularly hallucinations and delusions, are common in patients with epilepsy. The prevalence of epilepsy-related psychoses (ERP's) in refractory epilepsy is 17.5% and are generally not associated with epilepsy characteristics such as the presence of a lesion or epilepsy type.1 They can occur ictally, interictally, postictally, as an alternative psychosis (patients who become psychotic when the seizures are well controlled), and as a result of antiepileptic medications. Ms. Y is a 64 year old female with history of intractable epilepsy, diagnosed at age 12, poorly controlled after multiple medication trials and an implanted vagal nerve stimulator. Pt began having mood symptoms and psychotic symptoms around the age of 30. Although the details of her psychiatric history are unclear and there are no available records, she reports multiple psychiatric hospitalizations during her life time with depression and psychotic symptoms. There is no family history of depression or psychosis. When she experiences psychotic symptoms, she has command hallucinations and paranoia. They occur interictally. Most recently, she was hospitalized twice in 2013 and diagnosed with Psychotic Disorder secondary to a medical condition and eventually stabilized on paliperidone and sertraline, along with lacosamine, zonisamide, clonazepam, and lamotrigine for her seizures. An EEG performed in March 2013 revealed the presence of interictal epileptiform activity in the right frontal temporal area. Although her depression and psychotic symptoms remitted, she continued to have seizures, 2-10 times per month. Her Paliperidone was gradually tapered from a maximum of 6 mg per day to 1.5 mg per day with no recurrence of her psychosis. In November of 2017, she began drinking daily Aloe vera juice to help with "belly fat". Over the next 9 months, her seizure frequency significantly dropped. In the 9 months prior to starting the Aloe vera, she was averaging 3.8 seizures per month. In the 10 months following the initiation of the Aloe vera, she averaged 0.3 seizures per month while only being treated with lamotrigine 100 mg twice a day. Aloe vera has been cultivated for health and medicinal uses for many years. Aloe vera has been demonstrated to have antidiabetic, anti-inflammatory, anti-oxidant, immunomodulatory, antineoplastic and neuroprotective properties.2 Animal studies have demonstrated a dose dependent depressive effect on neurotransmission,3 a positive effect on memory and depression,4 and a significant protective effect on the development of kindling while also raising the seizure threshold.5 There is no evidence to support Aloe vera playing a role in the treatment of psychosis or seizures in humans. However, inflammation6 and oxidative stress7 are believed to play a role in the pathophysiology of psychosis, schizophrenia and bipolar disorder.

No. 100

Neuropsychiatric Manifestations Associated With Dyke-Davidoff-Mason Syndrome

Poster Presenter: Pooja P. Shah, M.D.
Co-Author: Smit Shah, B.A.

SUMMARY:
Dyke- Davidoff- Mason Syndrome(DDMS) is a medical condition characterized by cerebral hemiatrophy, compensatory cranial vault thickening; enlargement of cranial sinuses and ipsilateral falcine displacement along with numerous capillary malformations. Patients usually present with behavioral anomalies including aggressive behavior, seizure and mental retardation along with acute neurological symptoms like seizure and facial asymmetry. Our patient is a 26-year-old African-American female with autism spectrum disorder, reported history of anoxic brain injury, unspecified bipolar disorder, oppositional defiant disorder, seizure disorder on Saphris, Oxcarbazepine, Lamotrigine, clonidine at baseline who lives in a group home setting with constant 3 staff to individual patient support system with increased aggression and self mutilating behavior. On appearance patient was morbidly obese, minimally communicative she was alert oriented to name, her mood was irritable, her affect was flat and her behavior was not cooperative. Her speech was abnormal as she was only able to repeat few words. Thought process was limited. She denied any suicidal or homicidal ideations, denied delusions, denied any auditory or visual hallucinations. Insight and judgment were poor. Head MRI was consistent with Microcephaly, Sequela of chronic bilateral Anterior Cerebral Artery/Middle Cerebral Artery watershed territory infarcts with greater involvement present in the left hemisphere, associated with asymmetric

left-sided hemiatrophy (Dyke-Davidoff-Masson syndrome) and bihemispheric ulegyria, proptosis, prominence of bilateral lacrimal glands, diffusely diminutive appearance of the intracranial vasculature. This condition which was described in early 1930's for the first time and is being presented in the form of a case report and a review. The goal is to discuss imaging and behavioral manifestations along with associated differential diagnosis including Sturge Weber Syndrome and Encephalitis.

No. 101

Cyclical Vomiting Syndrome: Etiology, Pathogenesis, Differential Diagnosis, and Management

Poster Presenter: Pooja P. Shah, M.D.
Co-Author: Smit Shah, B.A.

SUMMARY:

Cyclic vomiting syndrome (CVS) is defined as severe vomiting attacks which have a sudden onset but recur periodically with a duration lasting from hours to days. On most occasions CVS self limits themselves. During attacks, signs including nausea, abdominal pain, photophobia, fever, pallor, dehydration, excessive saliva secretion and social isolation may accompany vomiting. Patients are completely healthy during the period between attacks. There is no laboratory or radiological finding which can explain the disease. It has been reported that the attacks may last for hours and days and the disease may last for months and years. The reasons of cyclic vomiting syndrome have not been elucidated fully yet. Hypersensitivity of the hypothalamo-pituitary-adrenal system and autonomic dysfunction in the autonomic system, disorders related with ion channels and mitochondrial disorders (like in migraine) and psychological factors have been blamed in the etiology. There is no clear consensus on the treatment of the disease. Life-style changes which target a decrease in the triggering factors, supportive therapies during attacks and prophylactic drug therapies are used. The information related with especially prophylactic treatment is limited, though various pharmacological agents are used. In this article, we present a case of a 21 year old female patient who was treated successfully with fluoxetine which is a selective serotonin re uptake inhibitor used in prophylactic treatment of CVS was presented. Etiology, pathogenesis, differential diagnosis and management have been discussed.

No. 102

Challenges Encountered While Managing Delirium in a Patient With PANDAS

Poster Presenter: Pooja P. Shah, M.D.
Co-Author: Smit Shah, B.A.

SUMMARY:

Ms. T is a 51 year old female with history of anxiety disorder, uterine cancer, congestive heart failure, fetal alcohol syndrome, skin picking disorder, gastroesophageal reflux disease, hypothyroidism, mental retardation, psychosis, schizoaffective disorder, bipolar type presented to ED with change in mental status, periorbital edema, aggression, combativeness and put in 4 point restraints. Her condition initially worsened with deterioration of mental status, combativeness, had purulent excoriating lesions over bilateral eyes and developed new onset unsteady gait. CPK was ordered with concerns of NMS and noted to be 1182. Antipsychotics were discontinued and patient was started on iv hydration. A thorough workup for delirium was performed including RPR, TSH, B12 and CT scan. ASO titres and Anti- DNAse B were ordered which demonstrated Streptococcal infection. CT scan showed vermian hypoplasia unchanged from her prior CAT scan. Patient was treated with IV antibiotics and IV hydration which significantly improved her symptoms in the next few days which was conclusive of PANDAS. CPK was downtrending. Pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections (PANDAS) is a hypothesis that there exists a subset of children with rapid onset of obsessive-compulsive disorder (OCD) or tic disorders related to Group A- beta-hemolytic streptococcal infection. Being that most patient's fail to vocalize the symptoms it is important to have a high index of suspicion in patients with skin picking disorder. Etiology is a possible autoimmune reaction which interferes with basal ganglia functioning.

No. 103

Cushing's-Induced Psychosis: A Case Report

Poster Presenter: Pooja P. Shah, M.D.

Co-Author: Smit Shah, B.A.

SUMMARY:
Cushing's Psychosis is an interesting medical condition that presents with typical features of Cushing's syndrome in addition to psychiatric manifestations including hypervigilance, depression, mood dysregulation and anomalies in sleep and cognition. Various models have been used to explain these psychiatric manifestations mostly suggestive of cortisol induced dysfunction of the neocortex and hippocampus which have high density of cortisol receptors. Hereby we present a case of Cushing's psychosis in a 41 year old female. Patient presented with symptoms of claiming that her ex-husband tried to kill her and that she feels very upset because she is not allowed to see her two kids. Patient endorsed homicidal ideations towards her ex-husband and stated that she would formulate a plan to execute it. Patient was only able only to provide us with her ex-husband's first name and had difficulty recalling his last name. Patient has significant problems with her speech related to an expressive aphasia. She perservated stating "I am not allowed to do so". She denied suicidal ideations on the ground that " she is not allowed to do it, since my ex-husband is controlling me ". She reported being in an abusive relationship and ex-boyfriend was trying to kill her. Denied access to firearms or weapons. On physical examination, patient was morbidly obese with a classic moon face, buffalo hump, hirsutism and reddish- purple skin discoloration on the abdomen and thighs bilaterally. On lab evaluation, 24 hour serum cortisol was found to be severely elevated. Other causes of psychosis were ruled out. Consequently the diagnosis of Cushing's induced psychosis was made which ultimately resolved over one week of time. In this poster we will describe the medical management, diagnostic tests and differential diagnoses which were utilized in management.

No. 104
Ataque De Nervios—Etiology and Differential Diagnosis: A Case Report
Poster Presenter: Pooja P. Shah, M.D.
Co-Author: Smit Shah, B.A.

SUMMARY:
Patient is a 37 year old divorced religious Dominican spanish speaking female brought to ED after acute onset of bizarre and combative behavior. Collateral elicited from patient's sister. Per sister, shortly after dinner, patient began talking gibberish, different language that was unheard stating, " demons are beating me up" and were trying to take he with them. It was associated with multiple somatic complaints including chest pain, arm pain, headache, feeling cold and diffuse body aches. Sister reported that patient had similar symptoms a few years ago which resolved after " reading the bible" and that she had sustained a stab wound while she attempted battling the demons then. The current episode did not resolve despite reading the bible. Sister reported that the beliefs were related to spiritual considerations. She denied any recent stressors. Denied any prior travel. She affirmed that patient understood only Spanish and that her current dialect was not familiar with her place of origin. Patient had no recollection of the events that led to her hospitalization. In this poster we have highlighted the possible etiological causes and correlation of culture bound phenomena including childhood trauma, anxiety disorder, panic disorder and affective dysregulation. She reported feeling exhausted and reports having an out of body experience. Increasing awareness of differences in culture manifest as psychological distress which heralds focusing on the correlation between culture specific illnesses and psychiatric diagnoses. Culture bound phenomena warrant a thorough evaluation of assessment of stress and trauma history.

No. 105
Takotsubo Cardiomyopathy: A Diagnostic Dilemma
Poster Presenter: Pooja P. Shah, M.D.
Co-Author: Smit Shah, B.A.

SUMMARY:
Patient is a 65-year-old Caucasian female with past medical history significant for breast and uterine cancer, chronic wounds in the bilateral lower extremities secondary to venous insufficiency on chronic antibiotic suppression, hypertension, hypothyroid who presents to ED with complaints of worsening chest discomfort unrelated to exertion. History is consistent with multiple prior inpatient admissions in the last 6 months with similar

complaints. Each episode was noted to occur after the death of a family member and patient was discharged on Aspirin and statins with recurrence of symptoms. EKG was consistent with anterior wall MI. Troponins were negative for cardiac ischemia. Patient underwent cardiac catheterization which showed diffuse coronary vasospasm. Coronary Angiogram did not reveal any blockage of the coronary arteries. Echocardiogram showed cardiac apical ballooning. Patient was evaluated by psychiatry for mood lability. Patient stated that she had lost four family members in the last six months and had witnessed a hurricane while she was on vacation. Patient was unsure of her life span due to the progression of malignancies. Patient stated that her mood is fair, has no appetite and does not sleep and only "cat naps" at night. She feels depressed since she is unable to keep up with the things that that she could do previously. Patient stated that all her life she had been a provider to her 12 siblings. She considered herself, " mother to my siblings" after the death of her mother. She feels guilty of not being able to save her sisters who died of cancer and is letting people down. Takotsubo cardiomyopathy is a rare form of non ischemic cardiomyopathy where there is a sudden weakening of the muscles of the heart. Rightly known as the 'broken heart syndrome', Stress could be a major contributing factor in the pathogenesis of Takotsubo Cardiomyopathy.

No. 106

Intranasal Insulin: A Promising Treatment for Major Neurocognitive Disorder

Poster Presenter: Sheema Imran, M.D.
Co-Authors: Asghar Hossain, M.D., Mehwish Hina

SUMMARY:

Alzheimer's disease (AD) is associated with brain insulin deficiency and insulin resistance, similar to the problems in diabetes. If insulin could be supplied to the brain in the early stages of AD, subsequent neurodegeneration might be prevented. Administering systemic insulin to elderly non-diabetics poses unacceptable risks of inadvertent hypoglycemia. However, intranasal delivery directs the insulin into the brain, avoiding systemic side-effects. Today millions people worldwide suffer from Alzheimer's or other dementia and, with the aging population, this number is expected to reach 65 million by 2030 and 115 million by 2050 (1). Few studies are currently investigating insulin and other gastrointestinal hormones and how they affect cognition. Researchers at the UW Medicine, Veteran's Administration Puget Sound and Saint Louis University have made a promising discovery that insulin applied at the level of the cribriform plate via the nasal route quickly distributed throughout the brain and reversed learning and memory deficits in an AD mouse model (2). Object recognition tests found that old mice that could not differentiate between old or new play objects, showed significant improvement in their memory after single dose of intranasal insulin. Importantly, researchers also found that intranasal insulin entered the bloodstream poorly and had no peripheral metabolic effects, a major concern in the medical community because it would lower blood sugar levels. Additionally, repeated doses increased insulin's efficacy in aiding memory. In the randomized double-blind, placebo-controlled trial led by Dr. Suzanne Craft at Brown University, the investigators studied 104 adults who had mild cognitive impairment (MCI) or were in the early to moderate stages AD (3). The trial concluded that intranasal insulin therapy improves memory and cognitive performance in people with mild cognitive impairment or early Alzheimer's disease. Intranasal insulin improves objective biomarker indices of neurodegeneration related to amyloid deposits and tau pathology in brains with early Alzheimer's disease. Therapeutic effects of intranasal insulin are detectable within a relatively short period (a few months), whereas without the treatments, neurodegeneration progresses in measurable degrees. Intranasal insulin is safe for use in elderly individuals who are in the early stages of Alzheimer type neurodegeneration. Intranasal insulin therapy holds promise for halting progression of AD.

No. 107

Identification and Mangement of Psychiatric Manifestations in Sjögren's Syndrome (PSS): A Literature Review

Poster Presenter: Sheema Imran, M.D.
Co-Authors: Asghar Hossain, M.D., Mehwish Hina

SUMMARY:

Primary Sjögren's syndrome (pSS) is a chronic autoimmune disease mainly characterized by the inflammation of exocrine glands; however, a broad spectrum of systemic manifestations may characterize the disease. This review summarizes our current understanding of the psychiatric manifestations of pSS, their pathophysiology, and treatment. The most common psychiatric manifestation in pSS is anxiety disorders with a prevalence ranging up to 57%. Other psychiatric conditions reported include adjustment disorders, schizophrenia, schizotypal, bipolar, and hypomania or mania. The pathogenesis of psychiatric-associated PSS may be linked to neuroimmunoendocrine processes, however evidence is still unclear. Due to the clinical reality of psychiatric diseases in pSS, it is imperative for psychiatrists to inquire about clinical features of SS, when examining patients with psychiatric symptoms, xerostomia, and keratoconjunctivitis sicca.

No. 108

Concussion and Mental Illness: Reversal of Psychiatric Symptoms Following Traumatic Head Injury

Poster Presenter: Sheema Imran, M.D.
Co-Authors: Avi Siwatch, Ghulam Sajjad Khan, M.B.B.S.

SUMMARY:

Behavioral changes such as poor concentration, dizziness, fatigue, headache, sleep disturbance, irritability, anxiety, and depressed mood persisting beyond 30 days is termed post-concussive syndrome (PCS) and is noted in 10-15% of patients suffering a traumatic brain injury (TBI).1 One of the first cases in literature was that of Phineas Gage, a construction worker who, after surviving a freak accident at his workplace in 1848, underwent severe personality changes. His physician at the time, noted an emotionally labile and irresponsible change in Gage's behavior after the accident.2 Here we present the case of a 60-year-old, Hispanic male with past diagnoses of major depressive disorder(MDD) for 20 years and panic disorder for 15 years. He suffered trauma to the head during an incident where he was attacked by some gang members. Following this incident, the patient reported that he no longer felt any symptoms stemming from his past psychiatric illnesses and was in a constant "happy mood". Current literature and protocol warrant immediate diagnosis and treatment of any behavioral changes following a trauma to the head, however, all imaging and neurological tests performed on our patient came back negative, in addition to an absence of any symptoms. The patient refused all treatment as he had, for all practical purposes, been "cured" of his mental problems.

No. 109

Rethinking Capacity: A Proposal for the Use of a Standardized Test for Capacity in Psychiatric Patients

Poster Presenter: Austin Takeo Momii
Co-Author: Robert G. Bota, M.D.

SUMMARY:

Contemporary biomedical ethicists construe `competence' as a minimal level of mental capacity that any patient must have in order to be considered capable of making medical decisions. When a patient is judged `competent' she/he is putatively entitled to a certain level of control over the type of treatment that she/he will receive. Control over medical decisions means that the patient will have access to salient information about her/his case and, as a consequence, medical professionals are morally required to provide her/his with detailed medical and scientific information germane to her decisions. However, in cases of incompetence, medical professionals are presumed to have permission, or perhaps even further, be morally obligated to make decisions on behalf of the patient. Moreover, it may also be permissible to paternalistically withhold information and protect the supposed incompetent patient from herself/himself. Curiously, given the preponderance of moral weight attributed to competence, very little has been offered to address and objectively verify patient competence. We therefore aim to (i) argue for the need of a screening test for medical decision making capacity and (ii) provide a sample screening test for use in hospitals that can provide assurance that the patient has capacity to make pivotal decisions regarding her/his own care.

No. 110

Delirium, Substance-Induced Mania

Poster Presenter: Brant Thayer
Co-Authors: David Roberto De Vela Nagarkatti-Gude, M.D., Ph.D., Marian Fireman, M.D.

SUMMARY:
Mr. S, a 55-year-old man with no prior psychiatric history or engagement with mental health care, was brought to the ED by police after suddenly exhibiting a violent outburst, confused mental state, and sustaining lacerations to his elbows that prompted his wife to call EMS. He had been diagnosed with pancreatic adenocarcinoma one year before which had been cleanly resected in a Whipple procedure 8 months prior. He received 11 cycles of chemotherapy (panitumumab + dexamethasone 12mg) with his last dose of chemotherapy 10 days prior to the ED evaluation. With brain MRI, urine drug screen, blood alcohol level, and serum electrolytes all within normal limits the psychiatry service was consulted to evaluate why this man with a 20-year marriage and well-known devotion to his three children suddenly appeared grandiose, pressured in speech, unable to sleep, and requiring restraint to facilitate medical evaluation in the ED. Mr. S was discharged home after 1 day evaluation but over the next month was brought to emergency departments or correctional facilities on 4 occasions despite completion of chemotherapy and lack of any new medical cause of altered mental status; each time he exhibited symptoms suggestive of mania. His behavior during this period was so disruptive that he was ordered by DHS not to contact his children and his marriage ultimately ended in separation. At follow up with oncology several months later, his mental status had returned to baseline, though he struggled with the loss of his family. In this poster, we review the difficulty in establishing a diagnosis of bipolar disorder when mania does not present until middle age and highlight the known potential risks of high dose corticosteroids while considering whether novel immunomodulatory chemotherapy could contribute to risk of major neuropsychiatric side effects.

No. 111
E-Sleuthing: Identifying Malingering Using Two Approaches to the Electronic Medical Record
Poster Presenter: Daniel C. Hart, M.D.
Co-Author: Erika M. Zavyalov, D.O.

SUMMARY:
This poster compares two cases of malingering in which the electronic medical record was scoured in order to establish patterns of onset of reported symptoms: One case, Mr. D., demonstrates a single inflexion point in which the record instantly and permanently changes. Another, Mr. C., portrays an insidious accumulation of symptoms not corresponding to any known disease process with fluctuations of physical and mental evaluations not consistent with injuries suffered. Case 1: Mr. D., a 58yo Caucasian male with reported past history of injury to shoulder while pulling survivors from a crashed helicopter, was conveyed to the emergency department after being found down in a stair case with reports anterograde and retrograde amnesia. Investigating his claims made to the many teams assigned to his care revealed that his shoulder had actually been injured in a pre-deployment training incident during which he fell while caring a litter. At the time of admission, he was already receiving two streams of disability payment and told the provider that this would help him lock in a third stream. The medical record revealed an instantaneous changing in historical reporting that changed the patient's injury from being caused by a training incident to having occurred while in a heroic role in combat. Case 2:Mr. M., a 30yo Caucasian male involved in a motor vehicle accident while on base in Iraq reported a three year history of increasing severe symptoms that started months after the initial incident and culminated in his being wheelchair bound, mild to moderately cognitively impaired, and suffering from non-epileptiform seizures. A thorough investigation revealed an insidious yet progressive appearance and augmentation of symptoms that resulted in a claim for and awarding of 100% disability pay. A chronologic assessment of records spanning both TRICARE and the VA health care systems provided much needed clarity in identifying the slow and steady increase in symptomatology. These two cases provide examples of electronic medical record usage in determining onset and course of symptoms helpful in identifying malingering.

No. 112
Evaluation of First-Onset Psychosis in Midlife: The

Importance of Organic Workup and Multidisciplinary Care
Poster Presenter: Gabriela S. Pachano, M.D.

SUMMARY:
This is the case of Mr. C, a 51 year old man with no prior psychiatric history who presented to the ER with a two month history of depressive and manic symptoms, weight loss, and recent onset of prominent paranoid delusions. Physical examination was unremarkable except for a subtle left arm weakness and left sided hyperreflexia. He was admitted to the psychiatric unit for evaluation and treatment of his psychosis. A complete organic workup was performed, as he had never experienced these symptoms before, hadn't seen a primary care provider in over thirty years, reported weight loss, and had subtle neurological findings on exam. Workup included brain MRI, electroencephalogram, chest x-ray, infectious disease workup, vitamin levels, and lead level. MRI showed a remote right frontal cortical infarct as well as punctate acute infarcts in the left parietal lobe. A subsequent CT Angiography demonstrated an occluded right Internal carotid artery (ICA), >70% stenosis of the left ICA, occluded proximal right A2 segment, diffusely diseased right cervical vertebral artery. Both Neurology and Neurosurgery were consulted and due to carotid findings, he was transferred to the Neurosurgery service and underwent a left Carotid Endarterectomy (CEA). Additionally, due to reported weight loss a CT of the chest, abdomen and pelvis was performed and results revealed an indeterminate left lower lobe peribronchovascular nodule. The patient had a significant smoking history; therefore a paraneoplastic panel was ordered which revealed a positive anti-neuronal voltage-gated potassium channel antibodies (VGKC Ab). These antibodies are associated with lung cancer and a paraneoplastic syndrome that can cause psychiatric manifestations. He will need a repeat chest CT for monitoring of this lung nodule and referral to the Neuro-Immunology clinic, given these findings. To this date, he continues to follow with Psychiatry, Neurology, Primary Care and Neurosurgery as an outpatient. This case highlights the importance of performing a complete organic workup in cases involving atypical presentations of psychosis, as well as that of performing a complete neurological exam on psychiatric patients. It also brings to light the importance of multidisciplinary care and consultation of specialists when needed. This poster will present this interesting case in more detail, as well as provide recommendations for workup for first onset psychosis in midlife. ?

No. 113
Obscure Dissociative Episodes in Complex Partial Seizures
Poster Presenter: Gregory Scott Brown, M.D.

SUMMARY:
Complex partial seizures are the most common form of epilepsy in adults. Behavioral changes, including dissociative episodes, have been discussed as a possible automatism of these seizures, especially when they originate from the temporal lobes. Complex partial seizures, diagnosed in the setting of dissociative episodes as the primary ictal event, have not been reported extensively in the English literature. Here, we report on a patient who presented to a psychiatric facility after three dissociative episodes and during her admission was found to have an abnormal EEG suggestive of bitemporal lobe epilepsy. Meticulous review of her prior medical records revealed no history of a neurological disorder or a history of seizures.

No. 114
Clozapine-Induced Myocarditis: The Need to Devise a Strategy for Early Recognition of a Potentially Fatal Adverse Reaction
Poster Presenter: Samreen Munir, M.D.

SUMMARY:
Mr.E is 31 year old male with a history of refractory schizophrenia who was admitted to our inpatient psychiatric unit with catatonia. Pt had mutism, stupor, and negativism. He was treated with lorazepam for catatonic symptoms with partial improvement, and clozapine was started for psychosis. Pt was mostly nonverbal so interval history and subjective information was difficult to obtain. After 15 days of clozapine treatment, with doses of up to 100 mg daily, he was found to have fever, diaphoresis, and tachycardia, with elevated serum CRP and troponin and eosinophilia developing

a few days later. Transthoracic echocardiogram demonstrated a mild pericardial infusion. Other possibilities of pericardial effusion were taken into account, but clozapine seemed the most likely explanation. Symptoms and signs abated within 2-3 days of discontinuing clozapine, except the pericardial effusion, which resolved over the following month. The patient was monitored closely without any further recurrence of myocarditis. Although clozapine is known to cause myocarditis and cardiomyopathy, it can be easily missed given the nonspecific presentation. Our patient was mute and unable to report symptoms. Myocarditis is an uncommon, potentially life-threatening disease that presents with a wide range of symptoms and can cause significant morbidity and mortality. Literature search revealed that clozapine-induced myocarditis may be underdiagnosed in the United States as compared to countries like Australia where the incidence is >1% , as compared to <0.1% worldwide. In this poster, we will discuss the need for cardiac monitoring guidelines such as the Clozapine REMS program to minimize the risks and mitigate the effects of clozapine-induced myocarditis, especially in the first 4 weeks of starting Clozapine, as the incidence is the highest in this period. Routinely adding markers of inflammation (e.g. CRP or ESR) and markers of cardiac damage (troponin or CPK) to the already mandated weekly routine blood work may facilitate earlier detection of clozapine-induced myocarditis. As myocarditis can be life threatening, close monitoring by taking pragmatic measures will increase case ascertainment and make physicians more cognizant of this rare but dangerous side effect.

No. 115

The Devil Is in the Details: Formication as a Dose Related Side Effect of Antidepressant Medication

Poster Presenter: Shambhavi Chandraiah, M.D.

SUMMARY:

Abstract Ms. H, a 61 year old Caucasian female with a 15 year history of depression presented to the psychiatry outpatient clinic for treatment of depression with insomnia. She had had 2 prior trials of Selective serotonin reuptake inhibitors with tachyphylaxis as well as irritability with a norepinephrine dopamine reuptake inhibitor. At presentation she had been on Venlafaxine 150mg for 11 years with diminishing effect in the past 2 years. Concurrent medical problems included arthritis and chronic lumbosacral pain treated with Tramadol and Meloxicam. Her Venlafaxine dose was increased to address the depression with addition of Trazodone 50mg mg at night for insomnia. At 3 week follow up the patient reported improved insomnia and sleep quality but also morning sedation from trazodone. As well, she reported new onset of evening and nighttime sensations (not present in the morning) of feeling like bugs crawling over her skin (formication) after starting Trazodone. The patient had chosen to discontinue trazodone herself with resolution of this side effect. We then embarked on a detailed assessment to rule out other potential etiologies for the formication including exposure to new topical or over the counter agents, herbal products, and drugs of abuse. She reported no past history of formication with prior antidepressant or other medication use. The dosage of her other medications for pain had remained the same for many months. She denied past psychotic symptoms or other current hallucinations. We chose to re-challenge the patient with Trazodone at a lower dose of 12.5-25mg (to minimize the morning sedation) with no return of formication. In this poster we discuss the various other reported causes of formication including those that can more predictably cause this symptom (cocaine or stimulant abuse), as well as various antidepressants, parkinsonian agents, drug interactions that may increase levels of a potentially offending agent, as well as dose related occurrence of formication. Hypotheses regarding the role of serotonin, norepinephrine, and dopamine in formication will be addressed. The importance of carefully ruling out other causes while confirming the temporal relationship to the offending agent in the onset or offset of formication will be discussed. This approach also applies to the careful delineation of any new unusual side effect with any medication use. Strategies to address such medication side effects include dose change, re-challenge with the medication, changing or stopping medication.

No. 116

The Use of Quantitative EEG for Differentiating Frontotemporal Dementia From Late-Onset Bipolar Disorder

Poster Presenter: Sinem Zeynep Metin
Co-Authors: Turker Erguzel, Gulhan Ertan Akan, Celal Salçini, Merve Çebi, Betül Koçarslan, Baris Metin, Oguz Tanridag, Nevzat Tarhan

SUMMARY:
The behavioral variant Frontotemporal dementia (bvFTD) usually emerges with behavioral changes similar to changes in late life bipolar disorder (BD) especially in the early stages. According to the literature, a substantial amount of bvFTD cases has been misdiagnosed as BD. Since the literature lacks studies comparing differential diagnosis ability of electrophysiological and neuroimaging findings in BD and bvFTD; we aimed to show their classification power using an artificial neural network and genetic algorithm based approach. Eightteen patients with the diagnosis of bvFTD and 20 patients with the diagnosis of late-life BD are included in the study. All patients' clinical MRI scan and electroencephalography recordings were assessed by a double blind method to make diagnosis from MRI data. Classification of bvFTD and BD from total 38 participants was performed using feature selection and a neural network based on general algorithm (GA). The artifical neural network method classified BD from bvFTD with 76% overall accuracy only by using on EEG power values. The radiological diagnosis classified BD from bvFTD with 79 % overall accuracy. When the radiological diagnosis was added to the EEG analysis, the total classification performance raised to % 87 overall accuracy. These results suggest that EEG and MRI combination has more powerful classification ability as compared to EEG and MRI alone. The findings may support the utility of neurophysiological and structural neuroimaging assessments for discriminating the two pathologies.

No. 117
Consideration of Auditory Hallucinations in Deaf Patients With Psychiatric Disorders: A Case Report
Poster Presenter: Stephanie Marie Klassen, M.D.

SUMMARY:
Mr. B, a 45-year-old deaf, non-speaking, Hispanic male with an unclear past psychiatric history of intellectual developmental disorder (IDD), presents to the inpatient psychiatric facility due to aggressive behavior and increasing agitation. Per family, patient destroyed property at the home, would leave the house at odd hours, and was difficult to control. He was not on any medications at the time. In the hospital, patient was aggressive towards staff, not redirectable, and destroyed property in the doctor's office. His behavior was eventually controlled on antipsychotic medication and soon he was calm and cooperative with staff and was able to follow simple instructions in sign language. Due to his IDD and little education (he was illiterate and non-fluent in sign language), communicating with the patient was very difficult, and assessing all parts of the mental status exam was problematic. Each interview was completed with an American Sign Language (ALS) interpreter, but it was unclear if patient understood each question. When asked about psychotic, depressive, or manic symptoms, the patient would immediately deny, or would just shrug his shoulders; at times he even used signs that did not make interpretable sense to the interpreter. He was also difficult to engage and had poor eye contact with the staff and interpreter, which further impeded a full interview. It was unclear if Mr. B was internally preoccupied, and the team began to question the possibility of auditory hallucinations in a deaf patient. In this poster, we discuss the challenges in diagnosing psychosis and the differences in auditory hallucinations in a deaf patient with a psychiatric disorder.

No. 118
Challenges in Diagnosis and Management of a Patient With Clozapine-Induced Delirium
Poster Presenter: Alexander Munjal, M.D., M.P.H.

SUMMARY:
Ms. M., a 63-year-old female with a past psychiatric history of schizoaffective disorder (bipolar type), panic disorder, and histrionic personality disorder, presented to the psychiatric consult service with altered mental status, disorganized thought process, bizarre speech with frequent reference to numbers, decreased verbal interaction, and response to internal stimuli. She was subsequently admitted to the inpatient psychiatry unit under a Temporary Detention Order due to risk related to inability to care for herself. The patient had been dropped off by her husband at her daughter's house 2 days prior.

Her daughter presented with her, but had not seen the patient for about a year due to the patient and her husband relocating out of state for his work. She reported that her husband had left her there due to frustration with her symptoms. Although it was unclear, she believed symptoms had been present for 6 months or longer. Clinic notes from 5 years prior to presentation confirmed a history of schizoaffective disorder, and outside records confirmed clozapine dosing. Initial laboratory workup was significant for cocaine on urine toxicology, but there were no other signs of acute cocaine intoxication such as vital abnormalities or EKG changes. Her level of activity was hypoactive. Clozapine levels were drawn but not immediately available to guide management. The differential diagnosis included depressive episode with decompensation of schizoaffective disorder in the setting of suspected medication noncompliance, toxic metabolic encephalopathy, and medication toxicity. The patient's condition initially worsened, and the team developed concern for catatonia due to increased hypoactivity, grimacing, awkward posturing, and verbigeration. However, lack of improvement despite treatment prompted revisiting the diagnosis. Workup including routine EEG revealed the presence of toxic-metabolic encephalopathy. She demonstrated subsequent improvement after discontinuation of clozapine. In this poster, we discuss factors confounding diagnosis and management of this patient with medication-induced delirium in the setting of a documented and long-standing history of primary thought disorder.

No. 119

Increased Risk of Readmission for Depression or Bipolar Disorder Following an Admission for Epilepsy Compared to Stroke and Medical Admissions

Poster Presenter: Anna Kim, M.D.
Co-Authors: Kyle Rossi, Nathalie Jette, Ji Yeoun Yoo, Kenneth Hung, M.D., Mandip Dhamoon

SUMMARY:
OBJECTIVE: To determine if epilepsy admissions, compared to admissions for other medical causes, are associated with a higher readmission risk for mood disorders. METHODS: The Nationwide Readmissions Database is a nationally representative dataset comprising 49% of US hospitalizations in 2013. In this retrospective cohort study, we used ICD-9-CM codes to identify medical conditions. Index admissions for epilepsy (n = 58,278) were compared against index admissions for stroke (n=215,821) and common medical causes (n=973,078). Readmission rates (per 100,000 index admissions) for depression or bipolar disorders within 90 days from discharge for index hospitalization were calculated. Cox regression was used to test for associations between admission type (defined in 3 categories as above) and readmission for depression or bipolar disorder up to 1 year after index admission, in univariate models and adjusted for age, sex, psychiatric history, drug abuse, income quartile of patient's zip code, and index hospitalization characteristics. RESULTS: The adjusted hazard ratio (HR) for readmission for depression in the epilepsy group was elevated at 2.80 compared to the stroke group (95% confidence interval (CI) 2.39-3.27, p<2×10-16), and 2.09 compared to the medical group (95% CI 1.88-2.32, p<2×10-16). The adjusted HR for readmission for bipolar disorder in the epilepsy group was elevated at 5.84 compared to the stroke group (95% CI 4.56-7.48, p<2×10-16), and 2.46 compared to the medical group (95% CI 2.16-2.81, p<2×10-16). CONCLUSION: Admission for epilepsy was independently associated with subsequent hospital readmission for mood disorders. The magnitude of elevated risk in this population suggests that patients admitted with epilepsy may warrant targeted psychiatric screening during their hospital admission.

No. 120

Oculogyric Crisis From Administration of IV Metoclopramide and IV Haloperidol Followed by Feigned Symptoms for Primary Versus Secondary Gain

Poster Presenter: Anna Kim, M.D.
Co-Authors: Kyle Rossi, Michelle Fabian, Justin Patrick Meyer, M.D., Kenneth Hung, M.D.

SUMMARY:
Background: Oculogyric crisis and other acute dystonic reactions are severe paroxysmal adverse effects of many anti-psychotics and anti-emetics. Alternatively, functional or feigned (for primary or secondary gain) movement disorders are common and not necessarily a diagnosis of exclusion when

seen by an experienced physician. In this case, our patient experienced one episode consistent with an oculogyric crisis followed by a second episode that was felt to be feigned for secondary gain. Case Report: A 48-year-old woman with no known psychiatry history and a history of migraine presented to the emergency department with headache for five days, mild fever, nausea, and vomiting. Per her chronic pain doctor, she was prescribed fioricet, zolpidem and alprazolam, and there was concern for medication misuse. Vitals were normal. Physical exam was unremarkable. Labs showed WBC of 14. Serum toxicology was unremarkable and urine toxicology was positive for opiates and barbituates. Overnight, she was given metoclopromide 10 mg IV twice and haloperidol 5 mg IV twice. She also received morphine, ketorolac, and ondansetron. She briefly felt better after haloperidol but reported to staff thoughts of killing herself. Psychiatry was consulted for suicidality. She was admitted to medicine and found in the morning to be stiff and poorly responsive. Neurology and psychiatry were called due to concern for possible neuroleptic malignant syndrome. CPK was 157. Blood pressure was elevated to systolic 180s, otherwise vitals were normal. On exam, patient presented with eyes wide-open, upward deviated gaze, mouth open in an "O" shape, neck and both arms stiff and extended in fixed posture. She was unable to respond verbally. She was diagnosed by neurology and psychiatry with oculogyric crisis and acute dystonia. Symptoms resolved within 5 minutes of giving IV lorazepam and IV diphenhydramine. Later in the evening, these symptoms recurred, though were less consistent and pronounced. The patient was able to speak through the abnormal movements, stating repeatedly "I need a pain pill." Abnormal movements transiently resolved when examiners left the room, and she was observed by a sitter. While patient was having this oculogyric crisis-like episode, a fly opportunely landed on her face, which caused her to stop the movements to swat at it before resuming the posturing. She received more diphenhydramine, followed by benztropine. The following morning she was back to baseline. Conclusion: It is important for physicians to exercise caution when administering multiple medications with dopamine blockade, notably IV haldol and metoclopromide. It is also important for the medical team to keep an open mind and remain vigilant when the clinical picture suggests potential functional embellishment or a feigned abnormal movement for primary (factitious) or secondary (malingering) gain. Of note, the second event possibly could have stemmed from the organic, first event.

No. 121

Predicting Successful Discharge From a Psychiatric Observation Unit: Which Factors Matter?

Poster Presenter: Amit A. Parikh, M.D.
Co-Authors: Natalie Anne Lester, M.D., Sandy Brundage

SUMMARY:

Predicting Successful Discharge From a Psychiatric Observation Unit: Which Factors Matter? Co-authors Amit Parikh, M.D., Sandy Brundage, Laura Thompson, M.D., M.S., Natalie Lester, M.D. Abstract Background: The number of psychiatric patients presenting to Emergency Departments (ED) across the country has risen during the past 10 years. At The Ohio State University (OSU), the number of ED patients seen annually by the Psychiatric Emergency Services (PES) increased from 3500 to 7500 from the years 2012 to 2016. As the number of patients seeking care in ED's has increased, the number of inpatient psychiatric beds has stayed the same; the gap between supply and demand has continued to increase. While observation units in the medical setting have been well established as both cost-saving and efficient, this model has not been widely explored in a psychiatric setting . At OSU we have been using a Psychiatric Observation Unit, called the Crisis Assessment Management and Linkage unit (CALM), to bring this model of care to patients in acute psychiatric crisis. Due to the relative lack of these units across the country there is a dearth of data regarding demographics and clinical factors of patients who can be successfully managed in this practice environment. The aim of this study is to identify characteristics of patients admitted to the CALM unit that predict successful management in an observation setting. Methods: Patient-level data from the electronic medical record (EMR) was gathered from 1000 randomly selected individuals who were admitted to the CALM unit from 2014-2016. The data include age, gender, race, ethnicity,

marital status, financial class, referral source, arrival means, and type of insurance. Observation care was deemed a success when the patient was discharged to home and did not require inpatient psychiatric care. Data were analyzed using Pearson's chi-squared tests. Results: Young adult patients (ages 18-44) were more likely to be successfully discharged from CALM than either older or younger patients (Chi2(6)=13.7, p=0.034). Insurance type was also a significant predictor, with 70.6% of patients on a managed care insurance plan vs 57.32% of patients of a Medicare plan discharged (Chi2(4)=906, p=0.047). Patients who presented to the ED as self-referrals (71.4%) or by law enforcement (68.8%) were more likely to be successfully discharged than patients who were referred by other health care providers (48.6%) (Chi2(2)=8.5, p=0.014). Conclusion: Understanding factors that predict which patients can successfully be managed on a psychiatric observation unit can provide practitioners with valuable information when making the level-of-care decisions for ED patients in acute psychiatric crisis. Development of psychiatric observation levels of care may reduce the use of mental health care dollars and stabilize patients in the least restrictive treatment setting.

No. 122

Complexities in Clinician Decision Making in a Case of Suspected Malingering

Poster Presenter: Catalina Trevino Saenz, M.D.
Co-Authors: Sina Shah, M.D., Raj V. Addepalli, M.D.

SUMMARY:

This is a case of a 42 year old Hispanic male with past psychiatric history of self-reported depressed mood and chronic suicidal ideation with multiple inpatient psychiatric admissions due to similar complaints. The patient presented to the Psychiatric Emergency Service complaining of command auditory hallucinations to kill himself. After evaluation patient was found psychiatrically cleared for discharge. Upon learning about his imminent discharge from the Emergency room, patient reported conditional suicidal ideation and made a hanging from neck gesture with a bedsheet. Patient was deemed for admission. The patient reported history of daily cocaine use, history of incarceration for 16 years and of non-adherence to home psychiatric medication which included an antipsychotic. Upon admission to the inpatient unit the patient was restarted on home medications. Marked discrepancy was found between the patient's claimed symptoms and the treatment team's observations. Presenting symptoms resolved within hours of initial evaluation. Once resolution of symptoms was sustained for three consecutive days and medication compliance was maintained, patient again expressed conditional suicidal ideation in the context of his imminent discharge from the inpatient unit. Review of medical records indicated that he was last discharged from the inpatient psychiatric unit 8 days prior to current admission with a similar presentation. Patient had a multiple psychiatric inpatient admissions with nearly identical presentations documented. Contact with his assisted outpatient treatment providers indicated that the treatment team repeatedly experienced difficulty addressing the veracity of his suicidal threats which lead to repeated referrals to the Emergency room. Decision was made to further patient's evaluation with a symptom validity test. Subsequent testing with the MMPI-2 inventory and M-FAST (Miller Forensic Assessment Test) revealed a profile highly suggestive of Malingering per DSM 5 (Z76.5). The patient presented extreme symptoms, a rare combination of symptoms, unusual hallucinations, unusual symptom course, and suggestibility to unusual items.

No. 123

Mood and Meningioma: Considering Neuroimaging in the Emergency Psychiatric Setting

Poster Presenter: Christopher Chin
Co-Author: Vilayannur Rao

SUMMARY:

In this poster, we present a case illustrating the consideration of neuroimaging in an atypical psychiatric presentation. Additionally, we briefly review findings from the literature that warrant such work-up. Ms. K is a 59-year-old Guyanese female with no past psychiatric history who presented to psychiatric emergency services for evaluation of sleep disturbance and personality changes. The patient was flown to the US and brought in by her family because she was not sleeping and having emotional instability for the past month. For the past two weeks, she exhibited mood lability and

delusional behavior. Her family also reported disinhibited and bizarre behavior like talking to the TV. Despite denying these reports, she endorsed recently speaking with her deceased mother, yet had an indifferent and apathetic affect. Upon further questioning, she also revealed a recent episode of confusion. Neurological exam was unremarkable with no focal deficits. CT scan of the head was obtained which demonstrated a large extra-axial hyperdense lesion in the right frontal region with 4 mm midline shift to the left. The patient was immediately transferred to medical emergency department for neurosurgical evaluation yielding a diagnosis of meningioma. Her neuropsychiatric symptoms resolved after craniotomy and resection of the meningioma. Although rare, psychiatric symptoms may be the only presenting signs heralding a brain tumor, especially in the emergency setting. Thorough history, physical exam, and collateral information are paramount in developing an index of suspicion for organic pathology, which can expedite the diagnosis. New-onset atypical psychiatric symptoms and personality changes in patients over the age of 40 years should suggest neuroimaging, even in the absence of focal neurologic signs. Symptoms of confusion, recent memory loss, anorexia without body dysmorphic symptoms, and relative lack of insight may also allude to organic brain disease.

No. 124

Diagnosing Compartment Syndrome Related to Opioid Overdose in a Psychiatric Crisis Setting

Poster Presenter: Esi Bentsi-Barnes, M.D.
Co-Author: James Jefferson Graham, D.O.

SUMMARY:

Mr. K, a 26 year-old Caucasian male with a past psychiatric history that included opioid use disorder presented to the Crisis Reponses Center (CRC) requesting detoxification from heroin and benzodiazepines. Of note, Mr. K was triaged by an RN working in a medical emergency room just prior to presentation to the CRC. Upon initial presentation, patient was observed to have pronounced swelling in both upper extremities, as well as his lower right extremity. Mr. K denied any pain at that time, but did acknowledge reduced range of motion and inability to bear weight on his right lower extremity. During further assessment, patient admitted to overdosing on intravenous heroin two days prior and that this caused his body weight to lie on his right leg for an extended period of time. Patient reported going to another medical emergency department for evaluation prior to presenting to the ED mentioned previously, but was discharged. While Mr. K was in the CRC, labs were drawn in order to rule out any medical emergencies. Labs returned with a Creatine Kinase (CK) value of 56, 305U/L (ref range 52-336 U/L). The patient was transferred to the medical emergency department and from there was admitted to the medical hospital with a diagnosis of compartment syndrome. Prior to discharge, Mr. K required a fasciotomy of the right lower extremity due to the risk of necrosis. This case highlights the importance of recognizing the less common, though dangerous, complications of long-term immobility during opioid use. In addition, it highlights the need to maintain vigilance for medical emergencies while working in a psychiatric setting.

No. 125

The Neurobiology of Suicide in Obesity

Poster Presenter: Lala Park, M.D.
Co-Author: Fernando Espi Forcen, M.D., Ph.D.

SUMMARY:

Background: Obesity has been related to inflammation and depression. In this talk we will present a general review of biomarkers in suicide and medical illness and from our obesity study in the emergency room. Method: We present preliminary results from a study of adult subjects presenting to a general hospital emergency room for depression. We measured the body mass index (BMI), white blood cells, lymphocytes, neutrophils, eosinophils, monocytes. Participants completed a 7-item Hamilton Depression Rating Scale. Correlation between BMI and neuroinflammatory markers to total 7-item HDRS scores and its individual items including suicidality scores were calculated. Results: Data was available from N = 76 subjects after applying exclusion criteria of acute intoxication, withdrawal, and malingering. Increased BMI was associated with increased anhedonia in males ($p = 0.03$) and increased somatic anxiety in females at a trend level but not to suicidal ideation for the group as a whole or in each of the genders. Depressed

mood was associated with increased total WBC count (p = 0.008) and increased monocyte count (p = 0.05). Increased suicidality correlated with increased basophil count (p = 0.02). Conclusions: Preliminary results of this study suggest that increased BMI is associated with depressive symptoms though the effect on the type of depressive symptoms may be different in males and females. The relationship of basophils and increased suicidality in emergency setting needs to be examined in future large scale studies as basophils secrete a number of cytokines involved in the inflammatory response.

No. 126

NMS or Not NMS, That Is the Question...

Poster Presenter: Oner Gurkan Gonen, M.D.

SUMMARY:

The Neuroleptic Malignant Syndrome (NMS) is a medical emergency which is less frequently associated with atypical antipsychotics such as clozapine when compared with classic or "typical" antipsychotic medications. NMS presents with a several clinical features, including tachycardia, mental status changes, diaphoresis, fever, rigidity, and elevated creatine phosphokinase (CPK). However, case reports have also described atypical NMS presentations, including lack of rigidity with clozapine. NMS symptoms can also be associated with clozapine overdose, which can further confound an initial presentation in an emergency department (ED) setting. We present the case of a 21 year-old man with a diagnosis of Schizophrenia treated with clozapine who initially presented to ED for disorganized behavior, confusion, increased CPK levels, sialorrhea, and autonomic instability. Initially suspected to be secondary to NMS in the context of a recent rapid titration of his medication, it was later determined that the patient had been non-compliant with treatment and overdosed on clozapine in the hours preceding admission. The review of this case will help to highlight atypical presentations of NMS with clozapine, symptoms associated with clozapine overdose, and ways to differentiate each presentation when adequate history is unavailable.

No. 127

First Contact in ED as Evidence of Poor Access to Ambulatory Mental Health Care in a Universal Health Care System

Poster Presenter: Paul Kurdyak

SUMMARY:

Introduction: Some mental health-related ED visits may be avoidable if individuals have access to effective ambulatory care. The study objective was to describe individuals whose mental health ED contact was their "first contact" with mental health services, and factors associated with this potential indicator of suboptimal access to care. Methods: From a population-based cohort Ontario, Canada residents 16 years of age and older with an incident mental health-related ED visit between 2010 and 2014 (n=435,875), we compared patients with and without outpatient mental health physician visits in the prior 2 years (first contact) on demographic, clinical and health service use variables. We also evaluated a subset (N=37,767) with an suicide-related ED visit. We used multivariable models to identify factors independently associated with first contact. Results: The incident ED visit was the first contact for 47% of patients Overall (N=206,419), and 47% for those with a suicide attempt (N=17,701). The factors independently associated with first contact were similar for the total population and for the suicide attempt ED visits. There was an increased likelihood of first contact for those who were: in the youngest or oldest age category, male, immigrant, rural, and having a substance use disorder. Increasing number of comorbid conditions, having a usual care provider, and presenting to the ED with high acuity were associated with a decreased likelihood of first contact. Discussion: First contact is common among mental health ED patients, including those presenting with a suicide attempt. The factors associated with first contact ED visits are known to be associated with poor access in general. Therefore, measuring first contact mental health ED visits may be a useful way to evaluate population-based access to mental health care.

No. 128

The Psychiatric Emergency Service in the Netherlands

Poster Presenter: Stefan Streitz

SUMMARY:

The psychiatric emergency service in the Netherlands Every region in The Netherlands has got an emergency service. This is a team of people that immediately goes to see the psychiatric patient after an instruction of for instance the general practitioner or the police. This special team works 24 hours a day, 7 days a week. The patient is then visited by members of the team, a social worker accompanied by a psychiatrist, or the patient will go to the ambulant unit (the polyclinic) directly. This is a very effective procedure, because behind the two people that visit the psychiatric patient, is a whole team of people who have the opportunity to start an ambulant treatment the day after. Through this team we have the opportunity to treat patients intensively without a needed admission in the clinic. The basis of this team are social-nurse-therapists who are very skilled. These people take lead in the treatment and have a psychiatrist as a back-up. Suicidal patients are through a special procedure included in a clinic upon a juridical decision. If it is expected that the patient is dangerous, the police will accompany the emergency teams. If psychiatric medication is needed, the treatment will start directly. Other forms of treatment are psychotherapy, a short treatment by conducting 5 meetings with the patient, or intensive ambulant treatment. In my opinion it is a very good example of how ambulant treatment of psychiatric patients works and is effective for everybody involved.

No. 129

Assessment and Management of Aggression and Violence: A Literature Review

Poster Presenter: Sandhya Chinala

SUMMARY:

Background: Violent incidents in the psychiatric setting, especially in the emergency and inpatient unit is a frequent and serious problem. Aggression and violence are accompanied by negative psychological and physiological consequences for both staff and the patients. Patient violence and aggression is prevalent in clinical care settings, yet clinicians are often inadequately trained to assess and respond to these types of behaviors. In this literature review, we identified key strategies and timely interventions in the management of aggressive patients in the emergency and inpatient settings. Methods: The authors review the literature and provide information. Results were reviewed from the past 15 years. We conducted a systematic search of electronic database for review articles or studies examining patient violence and aggression in critical care setting. Results: Risk factors and imminent signs of violent patient behavior are presented. We conclude with recommendations for pharmacological and psychological interventions that can help manage aggressive behavior in the emergency and inpatient settings. Conclusion: The relatively high frequency of aggressive and violent behavior in critical care settings increases the likelihood that clinicians working in this environment will encounter this situation. With the adequate information trainees will feel confident in their training and skills when dealing with aggressive and violent patients.

No. 130

Prevention of Mental Disorders in Children and Adolescents and Promotion of Mental Health: A Literature Review

Poster Presenter: Sandhya Chinala

SUMMARY:

Mental Disorders can occur throughout the life span, but the type and nature of the illnesses vary with the age. In the United States, at least 12 percent of the nation's 74 million children and adolescents suffer from one or more mental health disorders-including autism, attention deficit hyperactivity disorder, severe conduct disorder, depression, alcohol and psychoactive substance abuse and dependence. Instead of investing in prevention and early intervention programs and providing access to appropriate services, we have unconscionable rates of suicide, school dropout, homelessness and involvement in the juvenile justice system. Children are a supremely important asset. Their nurture and solitude are our responsibility. In order to achieve desired outcomes one should embrace all those services that contribute to the mental health care of children and adolescents, whether provided by health, education, social services or other agencies. Prevention of mental disorders is a public health priority. In view of the high and increasing burden of mental and behavioral disorders and the recognized limitations in their treatment, the only sustainable

method for reducing their burden is prevention. Evidence from home visiting interventions during pregnancy and early infancy, addressing factors such as maternal smoking, poor social support, parental skills and early child-parent interactions, have shown health, social and economic outcomes of great public health significance. In this literature review, we explore some of the evidence based interventions that can prevent mental disorders and help in promoting mental health.

No. 131

Cardiovascular Risk Assessment of ADHD Medications: A Literature Review

Poster Presenter: Navdeep Grewal

SUMMARY:

Pharmacotherapy has proven to be cost effective compared with no treatment or behavior therapy alone among children, adolescents and adults with ADHD.Both stimulants and non-stimulants pharma therapy have well established efficacy and safety profile. However side effects especially cardiovascular pose a big factor for medication compliance and adherence in the affected patient population. Sudden deaths and cardiac arrhythmias are the severe complications from pharmacological treatment of ADHD.Even these are rare events but is of significant concern for patients, caregivers and health care providers. As the FDA approved pharmaceuticals for ADHD carries a black box warning, this creates a scare for not seeking treatment. Undiagnosed and untreated ADHD ads on to the economic burden of job loss due to behavior difficulties, coping with daily stress of life as the symptoms get worse for these patients under stress. Patients are often found to self-treat in such scenarios with alcohol and other drug seeking behaviors. And in these patients things escalate to other morbid psychiatric disorders like Major Depression and even suicide. So there is a need to investigate the literature with evidence about severe cardiovascular risks associated with ADHD medications. Methods: The objective of this study was to conduct a literature review of the evidence of an association between prescription ADHD medications (stimulants and non-stimulants) and severe cardiovascular events. PUBMED, MEDLINE and Google Scholar searches were made with key words like ADHD cardiovascular risks, CNS Stimulant side effects, and Atomoxetine side effects. More than 50 studies were encountered. Out of these ten studies were selected to be included for the review. Selected studies were case based cohort or systematic review studies of population of children adolescents or adults using prescription medicine as the independent variable and cardiovascular events like Changes in BP, HR, arrhythmia, prolonged QT or stroke or sudden deaths as the dependent variable. Results: All studies included report no association of adverse cardiovascular events like sudden death with prescription medicine use. The only reported side effects associated with stimulant medication of amphetamine class are increases in systolic and diastolic blood pressure and heart rate in children, adolescents and adults. Orthostatic hypotension and marked bradycardia has been reported with alpha 2 adrenergic receptor agonists like guanfecine and clonidine either as monotherapy or add on to psychostimulants. Risk of overdose exists with any ADHD medications and especially with other coexisting Psychiatric disorders like Bipolar Depression. Conclusion: New data coming clearly suggest that sudden death or stroke risks associated with stimulant and non-stimulant use is individual patient based not to all population treated with the same medications.

No. 132

Are Psychosocial Interventions Effective in Preventing Relapse in Alcohol Use Disorder?

Poster Presenter: Navdeep Grewal

SUMMARY:

Introduction: Alcohol use disorder is a major contributor of financial burden in today's health care costs especially in chronic liver disease. CDC reports 50% mortality from chronic liver Disease in US is attributable to excessive alcohol use. Although Disulfiram, naltrexone and acamprosate have been found to be effective in managing AUD.There is substantial evidence that demonstrates the value of psychosocial interventions in treating AUD. Mental Disorders like Major Depression and anxiety often coexist in AUD patients. These dual diagnosis impact negatively on the course of illness and treatment outcomes. Common approaches for the treatment of alcohol dependence include individual or group

psychotherapy, one of the four FDA approved medications, Alcohol Anonymous or other mutual help organizations or some combination of these approaches. Despite major advances in research and development of effective psychotherapies and medications, many individuals who receive empirically supported treatment for alcohol dependence do not experience sustained reductions in drinking and associated problems. This research paper is an effort to review literature about clinical studies done to improve the effective treatment and relapse prevention in Alcohol use disorder. Methods: Relevant search for finding studies in search engines like PubMed, Ovid and psychiatry online was initiated. More than one hundred hits were obtained when key words like psychosocial interventions, relapse prevention and Alcohol use Disorder or Alcoholism were used. After a thorough screening of these results, five randomly controlled trials studies were selected and discussed to answer the specific question in the current study. Results and Conclusion of Current Question of Relapse Prevention in AUD: The challenging task under hand in chemical dependency units treating patients is to maximize the benefits for the relapsing patients with Alcohol use disorder. After the current research, it is fair to say that psychosocial interventions are effective under certain patterns of drinking status like in patients that carry a dual diagnosis of chronic liver disease and Alcohol related injuries as the evidence from studies suggest. The rest of the population of relapsers, the most powerful study conclusions come from USPSTF WHO study. This study recommends that clinicians screen adults aged 18 years or older for alcohol misuse and provide persons engaged in risky or hazardous drinking with brief behavioral counseling interventions to reduce alcohol misuse. Based on the classification of relapse determinants and high risk situations proposed in these models, numerous treatment components have been developed that are aimed at helping the recovering alcoholic cope with high risk situations. Definitely, these strategies help in relapse prevention in certain populations of high risk drinking. Brief Interventions in outpatient settings have shown some evidence of e

No. 133

Recurring Severe Hypothermia and Refractory Mania in the Setting of Atypical Antipsychotic, Valproic Acid and Oxcarbazepine Therapy

Poster Presenter: Oluwadamilare Ajayi

SUMMARY:

Ms. A. is a 76-year-old Caucasian female with a life long history of bipolar disorder type 1, with primarily manic episodes characterised by aggressive hypersexual behaviours, grandiose and paranoid delusions. She is a patient on a chronic geriatric psychiatry unit. After years on various atypical antipsychotics and valproic acid, she suddenly developed recurring severe episodes of hypothermia. This included treatment with quetiapine, olanzapine, valproic acid and oxcarbazepine therapy, occasionally complicated by urinary tract infections. Rectal temperatures ranged from 90°F to 95.2°F during a total of six true hypothermic episodes. Thorough medical work-up revealed no other apparent cause other than her psychiatric medications and they were ultimately discontinued. Unable to tolerate typical medications for bipolar disorder, she was successfully treated with a novel regimen without inducing hypothermia, including tamoxifen, a protein kinase inhibitor. In this poster, we review the literature of hypothermia in association with various psychiatric medications, and explore other factors that may have played a role in the development of her hypothermia. Finally, novel treatment regimens are reviewed for possible use in such patients.

No. 134

Neonatal Abstinence Syndrome and Neurobehavioral Outcomes: Case Series Report of Children at an Appalachian Psychiatric Clinic

Poster Presenter: Oluwadamilare Ajayi

SUMMARY:

Background: The opioid epidemic has been declared a national emergency. This epidemic has infiltrated all socioeconomic strata, the fastest growing demographic being that among rural Caucasian women. This indicates that it is ripping apart the fabric of society in far flung towns with little access to specialised addiction treatments. One aspect of the opiate addiction epidemic is the use in pregnant women. Babies with prenatal exposure to opiates, whether it is heroin or suboxone, are at risk for

Neonatal Abstinence syndrome at birth. While this syndrome can be managed medically in the NICU, the long-term effects of prenatal opiate exposure is not well-defined. In WV, 1 in 5 pregnancies are reported to have prenatal substance exposure. Methods: In this case series, we selected cases that presented to the University Child and Adolescent Psychiatric Clinic for psychiatric evaluations and had either a diagnosis of Neonatal Abstinence Syndrome at birth or were described to have symptoms similar to NAS as observed by the caregiver. We completed a chart review, including birth history when available, their medical history, their psychiatric symptoms, evaluations for possible prenatal alcohol exposure effects, psychological evaluations and treatment to date. Findings: While most children presented to treatment for common complaints such as inattention or hyperactivity, they also had concerns for mood swings. Many of the children were exposed to a variety of traumatic situations-such as placement in foster care and other adverse experiences that could be an outcome of substance abuse in parents. Children often needed a pharmacological regimen beyond that of routine ADHD treatment such as stimulants. Our cases also were primarily receiving healthcare benefits through Medicaid. Conclusions: School-age children in our sample presented with problems related to hyperactivity, impulsivity, inattention, speech and language issues and some social skills deficits. This suggests that effects of prenatal opiate exposure can persist into school-age. Further studies are needed to define the long-term outcomes. Clinicians must be aware of the possibility of such exposure when evaluating children. Psychiatrists treating adults with addiction must be mindful of the role of patients as parents. To reduce the incidence of Neonatal Abstinence Syndrome, psychiatrist must regularly inquire all men and women of child-bearing age about their current substance use patterns and plans for pregnancy. If pregnancy is not intended, then they must be guided towards appropriate contraception during recovery. If pregnancy is intended, then information on the possible effects of substances on the baby and resources on abstinence and recovery must be shared.

No. 135

Treatment of Childhood-Onset Schizophrenia: A Case Report

Poster Presenter: Tahira Akbar, M.D.
Co-Authors: Naveed Butt, Asghar Hossain, M.D.

SUMMARY:

Introduction: Early-onset schizophrenia (EOS) is defined as schizophrenia with onset prior to 18 years of age. Schizophrenia with onset between ages 13 and 18 is also referred to as adolescent onset. Onset of schizophrenia prior to age 13 is referred to as very early onset or childhood onset schizophrenia. Childhood-onset schizophrenia (COS), characterized by onset before age 13 years, has a prevalence of approximately 1 in 40,000 (1) Case Report: We presented a challenging case of 8-year-old female who was sent from school to Bergen Regional Medical Center for psychiatric evaluation, secondary to suicidal ideation and command type hallucinations of demonic voices to kill herself. Patient had two previous suicide attempts and reported alleged sexual abuse by her uncle at age 6-8 years. No history of substance abuse and no history of psychiatric illness. She was admitted and started on: - Risperidone 0.25 mg p.o q.h. s She responded well with improvement of her positive symptoms with a plan to follow up with outpatient psychiatrist. Discussion: Misdiagnosis of primary psychotic disorders such as early onset schizophrenia is a concern and children often have difficulty describing psychotic symptoms. One problem is distinguishing true psychotic phenomena in children from nonpsychotic idiosyncratic thinking, perceptions caused by developmental delays, exposure to disturbing and traumatic events, and overactive and vivid imaginations. There are major developmental differences in the perception of reality and developmentally or culturally appropriate beliefs (e.g., imaginary playmates and fantasy figures) that are not, of themselves, suggestive of psychosis. (2) Despite the relatively high (up to 5%) prevalence of psychotic symptoms in otherwise healthy children (3,4), COS is very rare and so epidemiologic incidence data with diagnoses based on standardized clinical assessments are lacking. It is generally accepted that the incidence of COS is less than 0.04% based on the observations from the National Institutes of Mental Health (NIMH) cohort. Approximately 30 to 50% of patients with affective or other atypical psychotic symptoms are

misdiagnosed as COS. (3) The treatment of early onset schizophrenia follows a similar approach like the adult onset schizophrenia. Most data on neuroleptic treatment of schizophrenia is from adult studies of typical and atypical neuroleptics. Sikich et al. conducted a double-blind study to compare the efficacy and safety of two second-generation antipsychotics (olanzapine and risperidone) with a first-generation antipsychotic (molindone) in the treatment of early-onset schizophrenia. The three treatment arms did not significantly differ in symptom reduction or time to discontinuation. Conclusion: The diagnosis of COS is very challenging and an early, accurate diagnosis of COS will have profound implications for treatment.

No. 136

Current Understandings of Concomitant Hoarding Disorder and OCD: A Literature Review

Poster Presenter: Tahira Akbar, M.D.
Co-Authors: Shabber Agha Abbas, Ghulam Sajjad Khan, M.B.B.S., Asghar Hossain, M.D.

SUMMARY:
Introduction: Hoarding disorder (HD) is a severe psychiatric disorder characterized by an extreme difficulty discarding or parting with possessions significantly compromising one's living spaces. The DSM-IV defined HD as part of the obsessive-compulsive disorder (OCD) spectrum, whereas the DSM-V separated the two disorders into distinct spectrums. Patients with HD and concomitant OCD represent a distinct manifestation of psychopathology although the evidence has not been conclusive regarding their characterization. We conducted this literature review to evaluate the evidence pertaining to such patients especially in the context of the new DSM-V definitions. Methods: A literature review was conducted on Pubmed, OvidMedline, Web of Science, and google looking for the terms 'hoarding disorder', 'obsessive' and 'compulsive', and/or 'ocd' in the same article. Articles solicited had to be published past the publication date of the DSM-V (May 2013) and had to be in English. Only those articles describing patients with comorbid HD and OCD were selected. Information pertaining to prevalence, characteristics, and treatment options was solicited from these articles. Results: Using the search parameters, 115 articles were identified of which 13 articles contained information fitting the patient criteria. Of the articles identified, eleven were primary articles and two were review articles. Some information gathered from our literature review confirmed earlier reported findings whereas some provided new insight regarding areas of comorbid disease clinical and non-clinical characterization. As reported in earlier studies the prevalence of comorbid HD and OCD in patients with either HD or OCD was found to be relatively high (16.5%-19.5%). An increase in severity of OCD symptoms was observed in HD patients. In addition, as reported earlier, response to treatment is poorer in comorbid patients than in those HD or OCD alone. Newer findings include identification of a bimodal presentation of OCD disease severity in HD patients (highest in youngest and in oldest HD patients), identification of similar level of cognitive difficulties in both disorders, a genetic correlation of 0.10, a phenotypic covariance of 50.4%, poorer response to limbic system surgery, gender differences, identification of OCD as a risk factor for HD development, and unique features of comorbid HD and OCD in the pediatric patient population. Conclusion: Patients with HD and concomitant OCD represent a unique subpopulation within both the hoarding and OCD spectrums. Although research has increased our understanding of differences between these patients and those without comorbid disorders relative to many areas, there remains a need to clarify treatment and management recommendations to enhance increased efficacy of both psychotherapies and pharmacotherapies. Our results may inform the design of various future clinical and non-clinical trials involving patients with these two disorders.

No. 137

Acute on Chronic Hoarding Disorder in a Geriatric Patient in the Context of Worsening Heart Disease: A Case Report

Poster Presenter: Renee L. Bayer, M.D., M.P.H.

SUMMARY:
The prevalence of hoarding is estimated at 2 to 6 percent among adults, tending to be older, unemployed, and single.1 The majority of patients have comorbid mental disorders, generalized anxiety

disorder, major depressive disorder and obsessive-compulsive disorder being the most common. 2 The patient is an 81-year- old Caucasian male, OCD treated with medication in his 40s, hypertension and benign prostatic hypertrophy, who called EMS after a fall in his home. The police officer on the scene reported: “residence full of trash and clutter… states he has not eaten since in three days. Junk prevented refrigerator from being opened all the way.…” The patient was admitted for weakness, and after a clinically significant EKG in the ED, significantly elevated CK troponin, BUN, and creatinine, diagnosed with NSTEMI, rhabdomyolysis, and AKI. He complained of feeling tired and weak in the last couple weeks. He denied difficulty disposing of items he does not need, and asked if his house is going to be condemned. Collateral information obtained from family confirmed hoarding behavior for 50 plus years, that worsened 10 years ago after his wife died, and stabilized. In the months prior to his admission, his family reports weight loss, and discontinued social activities. SSRIs have been effective in treating hoarding disorder, suggesting an association between decreased serotonin and worsening symptoms. The production of serotonin is known to be oxygen dependent. In fact, serotonin synthesis in the brain was measured using positron emission tomography with [11C]methyl-L-tryptophan as a tracer. Serotonin synthesis was higher when the participants were breathing 60% oxygen than breathing 15% oxygen. 3 A recent study explored the relationship between sudden or unnatural death and hoarding. Autopsy results showed that heart disease was the leading significant factor in 52% of all cases. 4 When compared by similar age group, only 33% of deaths were attributed to heart disease. 5 The difference in the incidence of heart disease suggests that hoarders may have a higher incidence of cardiac death. The hypothesis is that hypoxia, as in severe cardiac disease, may have contributed to the worsening hoarding symptoms due to associated decreased serotonin production. In this particular case, the acute worsening of his chronic hoarding behavior, with no obvious social trigger, may have been a harbinger of his underlying cardiac condition.

No. 138

Exacerbation of OCD Symptoms in the Context of Borrelia Burgdorferi Infection: Lyme Disease

Poster Presenter: Imran Samad Qureshi, M.D.
Co-Authors: Rachel Kossack, Asghar Hossain, M.D.

SUMMARY:
Abstract: Introduction: Lyme disease is a multisystem, inflammatory disease caused by the spirochete Borrelia burgdorferi and transmitted by the Ixodes Spp. tick. It is the most common arthropod-borne illness in the U.S. with the highest prevalence in the northeast. Patients usually present within the first month with fatigue, malaise, headaches, myalgias, arthralgias, with or without the characteristic erythema migrans rash. If left untreated, late disseminated disease may manifest as neuropsychiatric illness such as depression, anxiety, psychosis and obsessive compulsive disorder (OCD). Objective: The objective of our case report is to explore a possible association between Lyme disease and the development of psychiatric symptoms; in particular, sudden-onset relapse of OCD in a patient previously successfully treated in the context of infectious etiology. Case: This is a 18 year old Polish female who had a resolution of all OCD symptoms a year after starting fluoxetine 80mg. The patient then became non-compliant with psychotropic medication but still did not exhibit any OCD symptoms until 2 years later when she had a relapse of her OCD symptoms of obsessive hand washing and related rituals. A thorough history was taken and she reported symptoms of fatigue, migrating arthralgia and headaches 2 weeks after a hiking trip in New Hampshire. Blood tests confirmed Lyme and the patient was placed on antibiotics for 4 weeks beyond the resolution of her physical symptoms of Lyme. Once treatment for Lyme ended, the patient was started on a moderate dose antidepressant; Sertraline 100mg, and after 5 months had a complete res-olution of all OCD symptoms. Discussion: The Ixodes tick bite is painless and patients may only present with nonspecific flu-like symptoms, which makes the diagnosis of Lyme disease a challenge. The typical onset of OCD symptoms in patients without any prior infectious etiology is typically gradual, while a more acute onset presentation follows an infectious etiology in substantial number of cases. Neurosyphilis, caused by Treponema Pallidum, is another spirochetal infection that has been known

to cause onset of psychiatric illness in untreated patients such as psychosis, dementia and depression. Pathophysiological etiology of neuropsychiatric manifestations may be attributable to formation antibodies directed to brain cells precipitating psychiatric symptoms. Conclusion: This case report brings forth the intricacy of diagnosing and treating patients with an atypical presentation of OCD with a possible coincidental history of Lyme disease. By reviewing studies and exploring the neuroanatomical explanation of OCD as well as existing well studied models of neuropsychiatric symptoms developing from infectious etiology, we hope to support the plausibility of Lyme disease and OCD association with good response on moderate doses of SSRI's.

No. 139

Use of Citalopram in Post-Stroke Psychotic Depression in Context of Prolonged Comatose Phase: A Case Report

Poster Presenter: Imran Samad Qureshi, M.D.
Co-Authors: Asghar Hossain, M.D., Shabber Agha Abbas

SUMMARY:

Introduction: Post-stroke depression (PSD) is the most common neuropsychiatric sequel of a stroke and has a high prevalence rate (9% to 34%) in the initial post-stroke period. Apart from mood disturbances, the significance of PSD is its detrimental impact on post-stroke rehabilitation. Our case report addresses the role of serotoninergic therapy in PSD following a comatose state in context of cerebrovascular accident. Objective: The objective of this article is to report the successful treatment of PSD with citalopram in a patient recovering from a comatose state following intra-cerebral hemorrhage. Case: We report a 55-year-old Egyptian male who was referred to outpatient clinic by his primary care physician secondary to symptoms of depression. He was diagnosed with a brain tumor (occipital lobe) in 2014 and had surgical removal. Subsequently he developed an intracerebral hemorrhagic stroke and was in a comatose state for two months. Following recovery, he developed worsening symptoms of depression that abruptly progressed. He endorsed feeling tired and isolated and having nightmares, insomnia, depressed mood, hopelessness and anhedonia. He reported hearing voices, which were unrecognizable and non-command type in nature. He denied any suicidal or homicidal ideation. No other psychotic or manic symptoms reported. No substance abuse reported. He had a good response with 20 mg citalopram. Auditory hallucinations ameliorated in the absence of antipsychotics use. Subsequently, his depression remit with moderate dose of SSRI, and was well tolerated. Discussion: Post-stroke states themselves are associated with overall impaired functional outcomes, increased risk of suicide, and increased mortality. PSD and post-comatose effects can exacerbate post-stroke related difficulties. The association of depression and stroke is multifaceted and depends on the etiology including size, location and number of lesions, stroke subtype, stroke severity, social handicap, and family support. The role of selective serotonin reuptake inhibitors (SSRIs) in the post-stroke setting has been evaluated for both prevention and treatment of depressive symptoms; however, more robust studies are required for determining treatment recommendations. Additionally, there is paucity of literature addressing the treatment of PSD in the context of a post-comatose state. Since no study till date has explored the role of SSRIs in post-comatose patients, the positive response to citalopram therapy in our patient provides a rationale for potential further research into this area. Conclusion: Citalopram therapy may be considered in patients with post stroke depression who recovered from comatose states to help alleviate depressive symptoms. The role of citalopram and other SSRIs in this setting warrants further research to further explore treatment response.

No. 140

Bupropion-Induced Psychosis in Context of Alcohol Dependence: A Case Report

Poster Presenter: Imran Samad Qureshi, M.D.
Co-Authors: Sheema Imran, M.D., Mehwish Hina, Imran Samad Qureshi, M.D., Asghar Hossain, M.D.

SUMMARY:

ABSTRACT: BACKGROUND: Bupropion is an antidepressant with dopamine enhancing effect within synapses of brain. Precipitation of psychosis secondary to bupropion use is not a frequent presentation. Concurrent use of substances primarily

cocaine increases the chances for psychotic decompensation. Psychosis induced by bupropion in most circumstances is transient and may need only short term antipsychotic therapy for alleviation of psychotic symptoms with full recovery. OBJECTIVE: The primary objective of this case report is to study the association of psychosis with bupropion use. It also emphasizes how bupropion may unmask subtle psychosis in some patients due to its dopaminergic enhancing effect. CASE DESCRIPTION: 23 year-old Caucasian male presented to ER of our behavioral health facility with overt psychosis and disorganized behavior. Reportedly patient was expressing depressive symptoms of anhedonia, helplessness, low self-esteem and hopelessness along with depressed mood. He also had history of alcohol dependence in context of onset of his depression. He was recommended bupropion 150mg XL once daily by his primary care physician for depressive symptoms. After two weeks of compliance with this therapy he started experiencing persecutory delusions, thought blocking and disorganized behavior. He also exhibited irritability, agitation, and impulsive behavior which led him to binge drink. Subsequently he was admitted at our facility with florid psychosis, agitation and disorganized behavior. He was managed with low dose antipsychotic (risperidone) and cessation of bupropion therapy. This led to complete resolution of his psychotic symptoms. DESCRIPTION: Available literature reveals association of bupropion-induced psychosis with use of immediate release bupropion. On contrary, our case report reveals association of extended release formulation of bupropion with florid psychosis and disorganized behavior. Simultaneous use of specific substances specifically cocaine increases probability of psychotic decompensation. However in this case report patient had history of alcohol abuse, which is less likely to be the predisposing factor to psychosis. There have been cases reported with significant perception disturbances in context of overt psychosis induced by bupropion. Such cases show good response with low dose antipsychotics and cessation of bupropion therapy as seen in our case. It has been said that bupropion may unmask subtle ongoing psychosis or may uncover prodromal phase of schizophrenia when patient culminates into florid psychosis after starting bupropion. This has been debated and currently area of research interest. CONCLUSION: We conclude that prompt intervention in case of bupropion induced psychosis is imperative. Full recovery from psychotic episode is expected as seen in this case report. However cases where residual psychotic symptoms still persist after cessation of bupropion therapy, we recommend exploring underlying etiology

No. 141

A Case of Severe Hoarding Disorder-Challenges on an Inpatient Unit and Potential Repercussions in the Community

Poster Presenter: Mohammed Tashfiqul Islam, M.D.
Co-Authors: Ghulam Sajjad Khan, M.B.B.S., Shabber Agha Abbas, Asghar Hossain, M.D.

SUMMARY:
Introduction: As hoarding disorder is now a discrete diagnosis in the DSM-V various challenges arise in treating this condition especially for community providers. While committing these patients may be easy due to the danger they pose to themselves, others or property, additional challenges soon arise in the inpatient setting. With housing being a key component of many psychiatric admissions nationwide, the repercussions from hoarding disorder have the potential to impact availability of public housing for psychiatric patients, as well as potential public health hazards. Objective: This case highlights the potential severity of the danger posed by hoarding disorder. The unique aspects of this case include the psychosocial components contributing to the pathology, as well as comorbid personality traits that impact the patient's prognosis. In addition, the case highlights the challenges of providing care to such a patient on an inpatient setting and weighing treatment options with their perceived efficacy. Case: Patient is a 63-year-old Caucasian female who was committed involuntarily due to inability to care for herself. Historically, she has collected various items in her apartment. Prior to admission, she flushed cans down the toilet, and the apartment subsequently became flooded with sewage and was rendered uninhabitable. On the unit, she was needy, demanding, and often monopolized staff time and disrupted the care of other patients. She routinely made lists and letters, and was inflexible in her demands with regards to certain objects and possessions. Her hoarding behavior continued during

her inpatient stay. She was noncompliant with her medications and partially compliant with medical care. Given her treatment noncompliance, only psychotherapy proved aided in helping the patient gain insight into her conditions. Discussion: While it is believed to occur in 2-5% of the population, lifetime prevalence of hoarding is estimated to be as high as 14% according to some studies. The presence of hoarding behavior is seen in approximately 30% of obsessive compulsive disorder patients and are relatively common in schizophrenics. The presence of obsessive compulsive personality traits can further complicate care, as additional treatment modalities have to be considered, especially as in our case. While it may be uncommon to treat such a patient on an inpatient setting, community psychiatrists and assertive community treatment teams can coordinate long-term follow-up services with housing programs to ensure patient safety. Conclusion: Hoarding disorder presents unique challenges in psychiatry, especially from the perspective of community providers who have to weigh the pathology of patients with the acuity of dangerousness and coordinate with other providers to ensure proper care.

No. 142

Visual Hallucinations With Comorbid Flashbacks and Nightmares: Psychosis, Brain Injury, and Posttraumatic Stress Disorder (PTSD) Overlap

Poster Presenter: Mohammed Tashfiqul Islam, M.D.
Co-Authors: Shabber Agha Abbas, Ghulam Sajjad Khan, M.B.B.S., Asghar Hossain, M.D.

SUMMARY:
Introduction: Symptoms of psychosis and post-traumatic stress disorder (PTSD) often overlap. Given the relationship between trauma experienced (especially in early childhood) and the resulting association with psychosis, it is prudent to further explore the relationship between the two. Furthermore, physical trauma (namely brain injuries) have their own sequelae which are an important factor to explore in the development of psychosis. Objective: In this case report we aim to explore the relationship between psychotic symptoms and their relation to traumatic experiences. In particular, this case highlights a unique presentation of psychosis with visual hallucinations being the predominant symptom. These visual hallucinations are completely separate from flashbacks experienced as part of PTSD symptoms and raises interesting questions regarding the psychopathology of the disorder. Case: Patient is a 29-year-old West African male who presented to the emergency department for evaluation due to progressively worsening auditory and visual hallucinations over 2 weeks that caused marked impairments in daily functioning. His current symptoms began three years after he sustained a head injury (with loss of consciousness) in his home country during his childhood. The patient reported routinely experiencing flashbacks and nightmares related to traumatic childhood events. He also reported history of smoking cannabis on a regular basis, which further exacerbated his symptoms. He was admitted and stabilized on a regimen of risperidone and then discharged. Within two weeks of being discharged he again decompensated secondary to noncompliance and was readmitted. During the second admission he presented with more severe psychosis symptoms including grandiose delusions and religious preoccupation. He was stabilized on the same medication regimen and discharged after four days. Discussion: The majority of research in relation to visual hallucinations has been conducted in the context of various eye and neurodegenerative conditions, but there is little research to suggest their involvement in psychiatric conditions. As per one study, the weighted mean of visual hallucinations in schizophrenia is 27% and 15% in affective psychosis (with 7.3% for the general population), so this certainly challenges the popular notion that visual hallucinations are uncommon in psychosis. In addition, the lack of research linking the development of psychosis after experiences of trauma (both physical and emotional) presents opportunities for modifying existing treatment modalities for other psychiatric illnesses. Conclusion: The presence of visual hallucinations in the context of psychosis in addition to PTSD symptoms presents a unique opportunity to examine the relation between two separate yet overlapping disorders that can be potentially be complicated from the sequelae from physical trauma to the brain.

No. 143

Use of rTMS in Obsessive-Compulsive Disorder: A Review

Poster Presenter: Fatima Motiwala, M.D., M.P.H.

SUMMARY:
Introduction: Obsessive Compulsive Disorder (OCD) is a chronic psychiatric condition characterized by intrusive and repetitive thoughts (obsession) which provoke anxiety and it is accompanied by the compulsions to relieve anxiety. It can vary in severity. Refractory cases do not respond to medications and cause functional impairment for individuals affected by OCD. There are several pharmacotherapy and psychotherapy options to treat OCD but at times, OCD does not respond to any intervention. Repetitive Transcranial magnetic stimulation (rTMS) is a non-invasive procedure, in which repetitive magnetic stimulation is passed through the areas of brain with the coil placed on scalp. It has been used to treat many psychiatric disorders like mood disorders, anxiety, movement and tic disorders. Methods: Using search terms, " Repetitive Transcranial magnetic stimulation OR rTMS AND Obsessive compulsive disorder OR OCD" in the Pubmed database resulted in 52 hits. Inclusion Criteria: Clinical trials,open label studies, review articles and pilot studies examining the effect of rTMS on patients with OCD. Exclusion criteria: Treatment not involving rTMS. Results: After an initial abstract review, we found 11 randomized controlled trials (RCT), 4 open label studies, 3 review articles, 3 metanalysis and 2 pilot studies which showed the positive effect of rTMS on the reduction of OCD symptoms. In majority of RCTs, significant reduction of Yale-Brown Obsessive Compulsive Scale (YBOCS) score was a primary outcome. However there are 5 RCTs, 2 review articles 1 open label, and one case series which oppose the beneficial effects of rTMS on OCD symptoms. From our previous review article, we concluded that 2 RCTs showed reduction in OCD symptoms in patient having co-morbid Tourette disorder. rTMS has appeared to be safe especially in children and does not manifest many side effects. Discussion: rTMS appears to be a safe non-invasive procedure for refractory OCD cases. Majority of the clinical trials showed improvement in symptoms of OCD as measured by significant reduction in YBOCS score. Patients with OCD have also shown improvement in cognitive function after rTMS treatment. There is a evidence that rTMS has a also been used as an augmenting treatment to treat OCD and has shown to improve depression, which frequently manifets as a co-morbidty of OCD. Conclusion: rTMS has shown to be effective in reducing the symptoms of OCD, but since OCD exists with other psychiatric disorders, it is important to observe and examine the effects of rTMS on co-morbid psychiatric conditions along with OCD. We need to evaluate in detail if these co-morbid psychiatric conditions or medications can be confounding factors or barriers in non-respondent cases.

No. 144

Use of Gabapentin in Anxiety Disorders

Poster Presenter: Fatima Motiwala, M.D., M.P.H.
Co-Author: Dinesh Sangroula, M.D.

SUMMARY:
Introduction: Gabapentin also called as Neurontin belongs to an antiepileptic group of medications. Besides its use in the treatment of epilepsy, neuropathies (including diabetic neuropathy and post-herpetic neuralgia) and pain disorders like fibromyalgia, it is also commonly prescribed by primary care providers for insomnia, anxiety and mood disorders. Gabapentin is an amino-acid derivative of gamma-amino butyric acid (GABA) and it also increases the production of GABA which is an inhibitory neurotransmitter, although it does not act on GABA receptors). Gabapentin acts through alpha2delta subunit of calcium channels. Common side effects are headache, dizziness, somnolence and dry mouth. It is considered to be safe since it has less abuse potential than Pregablin(shares common structure with Gabapentin). Methods: Our initial literature search in Pubmed database resulted in 218 hits, using search terms: (Gabapentin OR Neurontin) AND (Anxiety disorder OR GAD OR Generalized Anxiety Disorder OR Panic Disorder OR Panic Attack). Inclusion criteria: review articles, clinical trials, cohort studies, case reports/ series and animal studies supporting the use of Gabapentin in anxiety disorders including Generalized Anxiety Disorder (GAD), Panic Disorder and Panic Attack. Exclusion criteria: studies with patient population suffering from Post-traumatic stress disorder(PTSD), or have co-morbidities with substance abuse disorder. Results: After an abstract review, we concluded 21 review articles generally mentioning the use of

Gabapentin in anxiety disorders, 12 review articles which were specific and have emphasized on its positive effect on anxiety. We found 10 animal studies,5 clinical trials (one specific to social phobia), 1 case series and 2 cohort retrospective studies supporting Gabapentin use in anxiety disorders. We reviewed articles pertinent to Gabapentin use in Panic disorders separately and our search resulted in a one clinical trial, 1 case report and 1 case series. On the other hand, we found one case series, two clinical trials showing results opposing the beneficial effects of Gabapentin in anxiety disorders. Although PTSD was an exclusion criteria, we found weak results of Gabapentin's use in PTSD. Other case reports drew our attention to rare side effects of Gabapentin like Chorea (n=2), Delirium and dependence (n=1), Hearing loss (n=1), and bilateral leg edema (n=1) Discussion: Gabapentin belongs to a class of medication which is used to treat epilepsy, pain disorders and neuropathy. Besides this, it has also been frequently prescribed for psychiatric disorders like mood disorders, and anxiety disorders especially in Social phobia. It is considered relatively safe which is evident by its use in elderly people for insomnia and agitation related to dementia, as the use of benzodiazepi

No. 145

The Relationship Between Anxiety Sensitivity and Nonsuicidal Self-Injury in Patients With Social Phobia, Agoraphobia, and Simple Phobia

Poster Presenter: Safiye Bahar Ölmez

SUMMARY:

Background: Nonsuicidal self-injury (NSSI) is frequently observed in phobias like other anxiety disorders. Besides different phobia types can have different anxiety sensitivity characteristics. The purpose of this study was to investigate the relationships between anxiety sensitivity and NSSI in patients with social phobia, agoraphobia and simple phobia in the category of anxiety disorders. Methods: The sample consisted of adult outpatients with a phobia (age 18-65) in addition to healthy individuals (age 18-65) who had not received any psychiatric diagnosis serving as the control group. The outpatients with only one of social phobia, or agoraphobia, or simple phobia were diagnosed based on American Psychiatric Association Diagnostic and Statistical Manuel of Mental Disorders fifth version (DSM-5) criteria. As data collection tools, the sociodemographic form, the Inventory of Statements about Self-Injury (ISAS), the Anxiety Sensitivity Index (ASI-3) were used. Results: This analysis included 42 patients with social phobia (mean age=21.0, 57.1% male) and 27 patients with agoraphobia (mean age=40.0, 33.3% male), 40 patients with simple phobia (mean age=33.5, 35.0% male) and 51 healthy individuals as the control group (mean age=26.0, 31.4% male). Total ASI-3 mean scores in all three phobia groups were higher than the control group (p=0.002 and p=0.001, respectively). The total score of ISAS was higher in the social phobia group (p=0.025). Cognitive anxiety sensitivity sub-scores of agoraphobia and simple phobia groups were higher than the control group (p=0.001 and p=0.001, respectively). There was also a positive correlation between ISAS functions sub-scores and cognitive anxiety sensitivity sub-scores in agoraphobia and simple phobia groups (r=0.784, p=0.037 and r=0.617, p=0.014, respectively). Conclusions: Different anxiety sensitivities and NSSI characteristics can be observed in different phobia types. In addition, anxiety sensitivity can play a regulatory role between anxiety and NSSI of phobia patients. Cognitive anxiety sensitivity can have an important role for dealing with anxiety. Patients with agoraphobia and simple phobia who have higher cognitive anxiety sensitivity, have a high potential of showing NSSI rather than behavioral inhibition for dealing with anxiety.

No. 146

A Comparison of Childhood Emotional Abuse and Emotional Neglect History in Patients With Panic Disorder and Control Group

Poster Presenter: Safiye Bahar Ölmez
Co-Author: Ibrahim Burak Ölmez

SUMMARY:

Background: It is widely known that childhood traumatic experiences are associated with most of the adult life psychiatric disorders such as disassociative disorders, mood disorders, anxiety disorders and so on. In this study, the relationship between childhood traumatic experiences and panic disorder development was examined with regards to all types of traumas including sexual abuse, physical

abuse, emotional abuse, emotional neglect, and physical neglect. Method: The sample for this study consisted of 59 outpatients with panic disorder (age 18-65) and 61 healthy individuals (age 18-65) serving as the control group. These individuals in the panic disorder group were selected from outpatients who had been diagnosed with panic disorder based on American Psychiatric Association Diagnostic and Statistical Manuel of Mental Disorders fifth version (DSM-5) criteria and who did not have been diagnosed any other psychiatric disorder. The 61 healthy individuals in the control group were selected from medical staff and hospital attendants who had not received any psychiatric diagnosis or treatment. The individuals in both groups volunteered to participate in this study, and written informed consents were obtained from each of them. As data collection tools, the socio-demographic form, and the Childhood Trauma Questionnaire (CTQ) were used. Results: The main finding we report is that the individuals in the panic disorder group were found to have significantly high scores in comparison to those in the control group with respect to the total CTQ score (p=0.006) and specifically, the emotional neglect (p=0.004) and the emotional abuse sub-scores (p=0.009). Besides the increase in the number of siblings is significantly related to the increase in physical neglect and sexual abuse (r = 0.335 and r = 0.372, respectively). When we consider the relationship between duration of disorder and childhood traumatic experiences, a positive relationship was found between the duration of disorder and physical neglect (p = 0.022), and no significant relationship appeared between the duration of disorder and CTQ total score (p > 0.05) Conclusions: The main result of this study is that panic disorder is a mental disorder in which childhood traumatic events play a critical role in its developmental process. Also obtaining significantly higher emotional abuse and emotional neglect in patients with panic disorder with regards to healthy individuals seems to be a precursor for the identification of a psychiatric disorder group with respect to the type or quality of trauma in childhood.

No. 147

An Investigation of Impulsivity and Nonsuicidal Self-Injury Characteristics of Patients With Social Phobia

Poster Presenter: Safiye Bahar Ölmez

SUMMARY:

Objective: In this study, it was aimed to investigate the relationship between impulsivity, and nonsuicidal self-injury (NSSI) characteristics in patients with social phobia. Methods: The sample consisted of outpatients (n=41) (age 18-65) in addition to healthy individuals (n=52) (age 18-65) who had not received any psychiatric diagnosis serving as the control group. The outpatients with Social Phobia were diagnosed based on American Psychiatric Association *Diagnostic and Statistical Manuel of Mental Disorders* fifth version (*DSM-5*) criteria. As data collection tools, the socio-demographic form, the Barrat Impulsivity Scale (BIS-11), the Inventory of Statements about Self-Injury (ISAS), and the Liebowitz Social Anxiety Scale (LSAS) were used. Results: BIS-11 mean total scores in Social Phobia group were higher than controls (p=0.001). NSSI was 38.6% in the social phobia group, while it was 11.7% in the control group. Besides total score of ISAS was higher in the Social Phobia group (p=0.025). On the other hand contrary the expectations there is no correlation between ISAS and BIS-11 scores in groups. When we investigated the relation between impulsivity and symptom severity in social phobia group; there was a negative correlation between BIS-11 attention sub-scales score and LSAS avoidance sub-scale score (r =-0.353, p =0.022). Conclusions: Clinicians should question the anxiety coping behavior of patients with social phobia in detail in the mental state examination. Impulsivity can serve as a maladaptive way for patients with social phobia to deal with social anxiety. NSSI also can be a type of this maladaptive way. Besides, attention-related impulsivity may also increase typical withdrawal behavior symptom severity of patients with social phobia.

No. 148

Bugs From the Brain: A Different Approach to Treating Delusional Parasitosis

Poster Presenter: Anshul Pandey, M.D.

SUMMARY:

Introduction: Delusional Parasitosis is an uncommon disorder characterized by a false belief that the

patient's body is infested by parasites. Hard to treat and involving multiple disciplines: treatment is a long process and does not guarantee a cure. But, if the delusions lead to an obsessive-compulsive syndrome with poor insight, could targeting the OCD component produce better outcomes in overall care? Case: Patient is a 32-year old woman with a previous history of MDD, Borderline Personality disorder and a remote history of methamphetamine abuse, who was seen as an outpatient for medication management and psychotherapy. She was recently discharged from the Psychiatry unit after a suicide attempt. She was discharged from the hospital on quetiapine for mood stabilization, and mirtazapine for depression. Sessions continued with raising her mirtazapine dose and focused supportive psychotherapy. After a few sessions, she started to report a mite and tick infestation in her house. Her sessions progressed with her obsessions with the infestation worsening and leading to her being holed up in her home all day, wearing only hooded garments, gloves and multiple layers of clothing, and cleaning her home for 5-6 hours daily. Gradually she was covered in scabs and scratches all over her body, showing this as proof of the presence of the parasites. Suspecting delusional parasitosis, a referral to Dermatology was made which confirmed the diagnosis. She was started on pimozide, but her symptoms did not improve. Noticing the co-existing, deteriorating lifestyle with repetitive cleaning daily, social isolation fall-out with family, a different approach was tried. What if her lifestyle was a result of OCD with very poor insight? Would targeting her OCD-like symptoms help improve her lifestyle or possibly even the delusional parasitosis? She was started on fluoxetine and the dose was gradually increased to higher doses. Gears were switched to more OCD-focussed CBT. Slowly, a response was visible. Her obsessions with the parasites decreased in intensity and her compulsion to clean went down significantly. She leaves her house more often now, is back in society once again and feels better overall. Her insight regarding her obsessions and compulsions has improved. Unfortunately, her delusions about parasitosis have not improved but she is more open to the idea of a delusional pathology now. Most importantly, her distress from the obsessions and the compulsions of cleaning has improved significantly. Conclusion: Delusional Parasitosis is very difficult to treat and the delusions rarely improve or get eradicated. But, an approach to target the symptoms arising from the delusional pathology, as in our patient's OCD-like syndrome, would bring significant relief to the patient's life and prevent or treat significant morbidity associated with Delusional Parasitosis.

No. 149

Anxiety and Depression in Patients With Chronic Kidney Disease in Limassol, Cyprus

Poster Presenter: Dimitris Avramidis
Lead Author: Konstantinos Argyropoulos
Co-Authors: Giorgos Charalambous, Panagiota Faidonos, Antri Aresti, Argyro Argyropoulou, Giannis Gastouniotis, Eleni Jelastopulu

SUMMARY:
Introduction Populations facing chronic illness have been reported to have poorer quality of life and mental health, including higher levels of depression and anxiety. Purpose The purpose of the present study was to estimate differences referring in the presence of anxiety and depression in two groups of renal disease patients. Moreover, to investigate the relationship of sociodemographic variables such as gender, age, educational level and family status to mental health. Material - Method: A sample of 230 patients were recruited, consisting of 130 patients undergoing hemodialysis (HD) and 100 patients with successful kidney transplantation (KT). The instrument used to assess the anxiety and depression levels was the in Greek translated and validated Hospital Anxiety and Depression Scale (HADS). The absolute score for each component ranges from 0-21, and for overall psychological distress from 0-42, consistent with low to high levels of anxiety, depression or both respectively. Statistical analyses were performed using the SPSS v. 19.0. Results: Patients with HD scored overall higher on the HADS compared to patients with KT (13.52 vs 10.30). Both patient groups showed higher mean scores in depression (HD: 8.85; KT: 6.20), whereas lower scores were observed in the anxiety component (HD 4.67; KT 4.10). No statistically significant differences were found in the mean value of anxiety (t=1.16, p=0.249) between both groups. Regarding depression and the overall score we observed statistically significant differences in the

mean values for depression (t=3,86, p <0,001) and for the overall HADS score (t=3,12, p=0,002) between the patients undergoing hemodialysis compared to patients with KT. Investigating gender differences, female patients scored higher in all dimensions and in both groups compared to males (HT: HADS 16.10 vs 11.91, Anxiety 6.40 vs 3.58, Depression 9.70 vs 8.33; KT: HADS 11.20 vs 9.70, Anxiety 4.30 vs 3.97, Depression 6.90 vs 5.73), being statistical significant only in the group of HT patients. In patients with KT older ages, lower educational level, being divorced or widowed and being retired scored significantly higher, whereas in HT patients only educational level and marital status play a significant role. Conclusions: In the present study, the overall HADS score as well as the single component scores of anxiety and depression were higher in patients with HT, indicating thus the higher psychological discomfort in these patients. Furthermore, the scores were associated with demographic parameters such as gender, age, educational level, marital and occupational status.

No. 150

Electroconvulsive Therapy for Obsessive-Compulsive Disorder: A Case Report and Review of the Literature

Poster Presenter: Justin LaPorte, M.D.
Co-Author: Thomas A. Veeder, M.D.

SUMMARY:
Mr. S., a 27-year-old Caucasian male with prior history of obsessive-compulsive disorder (OCD) was admitted for his second inpatient psychiatric treatment following medical clearance for a near-lethal salicylate overdose (OD). Upon admission, Mr. S. endorsed one year of persistent, intrusive, and ego-dystonic thoughts of death and suicide in addition to ruminative and extreme self-doubt and over-analysis. He additionally noted two months of depressed mood, poor sleep, hopelessness, poor appetite, and anhedonia, culminating in his suicide attempt. He was diagnosed with OCD and comorbid Major Depressive Disorder (MDD). Due to the severity of his symptoms and lack of treatment response on several pharmacologic agents (fluvoxamine, duloxetine, aripiprazole, risperidone, and doxepin), a referral for electroconvulsive therapy (ECT) was made. After eight index treatments, Mr. S. had full remission of his OCD and depressive symptoms. He presently takes no medications and is stabilized on once monthly, maintenance ECT treatments. While there is inconsistent data to suggest that ECT is an effective treatment for OCD, herein lies a case of complete remission of OCD and depressive symptoms, achieved using ECT treatment.

No. 151

Differences in Psychiatric Symptoms Depend on Tinnitus-Related Characteristics and Gender in Tinnitus Patients

Poster Presenter: Tae Sun Han
Co-Authors: Jung Jin Kim, Jo-Eun Jeong, Shi-Nae Park

SUMMARY:
Objective: Previous studies regarding gender differences in terms of tinnitus distress have shown conflicted results. Therefore, this study aimed to evaluate the correlation between the severity of tinnitus and psychiatric comorbidities, and the gender differences in tinnitus patients. Study design: This cross-sectional study included 136 female and 119 male patients who visited Seoul-Saint- Mary`s hospital Otology outpatient clinic for tinnitus from February 2015 to July 2015. Patients were submitted to series of instruments, including Tinnitus handicap index(THI), Beck depression inventory(BDI), Brief Encounter Psychosocial Instrument-Korean version(BEPSI-K), and Visual analogue scales(VAS) to assess the duration and loudness of tinnitus, and the patients' awareness and degree of annoyance. Results: THI scores are added to yield a classification of the tinnitus handicap, from Normal (0 to 16), mild (18 to 36), moderate (38 to 56), and severe (58 to 100). Among the tinnitus severity groups, BDI and BEPSI-K were higher in the severe group than normal, mild, and moderate groups. There was a significant correlation between tinnitus severity(THI) and the duration and loudness of tinnitus, patients' awareness and degree of annoyance, the influence on life, and stress index(BEPSI-K) caused by tinnitus. In regression analysis, the influence on life, depression scale(BDI), stress index(BEPSI-K) affect the severity of tinnitus as an independent variables. Although women were more depressed than men on depression scale(BDI), correlation efficient between depression scale(BDI), stress index(BEPSI-K) and

tinnitus severity(THI) were higher in men when controlling age and duration of tinnitus on partial correlational analysis. Conclusion: The severity of tinnitus was significantly correlated with depressive symptoms and stress index, and gender differences were found in correlation between tinnitus severity and psychiatric symptoms. Considering these differences, gender-tailored therapy could be meaningful in such patients. Applying self-reported scale for depression symptoms to all patients visiting otology outpatient clinic could be done in order to screen and assess those who are in need of psychiatric support.

No. 152

A Comparison of the Clinical Characteristics of Panic Disorder With and Without Generalized Anxiety Disorder

Poster Presenter: Jongsoo Oh
Co-Authors: Sang-Hyuk Lee, Tai-Kiu Choi, Jeong Hoon Kim

SUMMARY:

Background: Strong comorbidity occurs between panic disorder and generalized anxiety disorder. This study aimed to investigate differences in demographic, clinical characteristics, and quality of life between panic-disorder patients with generalized anxiety disorder (PD+GAD) and without generalized anxiety disorder (PD-GAD). Methods: We examined data from 218 patients diagnosed with PD+GAD(150 patients) and PD-GAD(68patients). The following instruments were applied: Stress coping strategies, Beck Depression Inventory(BDI), Beck Anxiety Inventory(BAI), Panic Disorder Severity Scale(PDSS), Anxiety Sensitivity Index-Revised(ASI-R), Albany Panic and Phobia Questionnaire(APPQ), NEO-neuroticism(NEO-N), Short Form health survey-36(SF-36). Results: Compared to the PD-GAD group, the PD+GAD group had higher scores in emotion-focused coping strategies and clinical severity, such as BDI, BAI, PDSS, ASI, APPQ, and neuroticism. The PD+GAD group showed lower scores in most scales in SF-36 status than PD-GAD group. Conclusion: This study shows that PD+GAD patients are different from PD-GAD patients in coping strategies, clinical severity and quality of life. It emphasizes the need of personalized therapy in clinical approach among patients with PD+GAD.

No. 153

Positive Correlation Between Early Trauma and Anxiety Sensitivity in Patients With Panic Disorder

Poster Presenter: Jongsoo Oh
Co-Authors: Sang-Hyuk Lee, Tai-Kiu Choi, Jeong Hoon Kim

SUMMARY:

Background: Early trauma is associated with increased risk of panic disorder(PD). It has long been recognized that anxiety sensitivity plays a important role in the panic disorder. The object of this study is to investigate the relationships between early trauma and anxiety disorder in patients with panic disorder. Methods: Ninety-five patients(mean age=38.01, 42.5% male) with PD were included. The following instruments were applied: Anxiety Sensitivity Index-Revised(ASI-R), Early Trauma Inventory (ETI). Results: ASI-R scores correlate positively with ETI scores in patients with panic disorder (r=0.351, p=0.001). Also, ASI subscale such as respiration(r=0.300, p=0.003), public(r=0.359, p<0.001), cardiac(r=0.257, p=0.012), cognition(r=0.296, p=0.003) correlate positively with ETI score in patients with panic disorder Conclusion: We showed that positive relationship between early trauma and anxiety sensitivity in patients with panic disorder. Further study is required with larger sample sizes.

No. 154

Anxiety and Depressive Symptoms Evaluation in Bariatric Surgery Candidates

Poster Presenter: Luiza Schmidt Heberle, M.D., M.S.
Co-Authors: Karin Mombach, Alexandre Padoin, Carolina Goldman Bergmann, Lívia Nora Brandalise, Luciano Billodre Luiz, Juliana Azevedo, Denise do Prado Bystronski, Alberto Kerber, Cesar Luis de Souza Brito

SUMMARY:

Background: Obesity and psychiatric disorders are likely to exert considerably negative impact on the quality of life of patients. In this regard, one may observe a high incidence of anxiety disorders in obese patients, particularly among candidates for bariatric surgery. Anxiety and depressive symptoms, as well as substance abuse are a substantial threat to

successful results following bariatric surgery. Objectives: To evaluate the association between the intensity of anxiety symptoms and body mass index, depressive symptoms and alcohol and tobacco use in obese patients who apply for bariatric surgery. Setting: Center of Obesity and Metabolic Syndrome at the Pontifical Catholic University of Rio grande do Sul, Brazil. Methods: Cross-sectional study involving 425 patients that have applied to bariatric surgery. Levels of anxiety and depression were assessed by the Beck Anxiety Inventory and the Beck Depression Inventory. Alcohol use was assessed by Alcohol Use Disorders Test and tobacco use by the Fagerström Test of Nicotine Dependence. Results: Among the 425 patients, 33.4% scored BAI above the cut-off point, while 59.3% scored BDI above the cut-off point. A significant statistic association between anxiety and depressive symptoms (P <0.001) was found. A statistically significant, direct and weak correlation between BAI scores and BMI was found. No patient presented AUDIT above the cut-off point and 4.7% were smokers. Conclusions: The high prevalence of anxiety and depressive symptoms detected is alarming and shows how much bariatric surgery candidates are subject to emotional suffering. The low prevalence of alcohol and tobacco use confirms findings of other studies.

No. 155

Skin and Thickness: The Containing Function in Obesity

Poster Presenter: Luiza Schmidt Heberle, M.D., M.S.
Co-Authors: Juliana Azevedo, Karin Mombach, Luciano Billodre Luiz, Lívia Nora Brandalise, Denise do Prado Bystronski, Alberto Kerber, Carolina Goldman Bergmann, Cesar Luis de Souza Brito

SUMMARY:

Objective: The skin plays a key role in the primary organization of the psyche. The purpose of this study is to review the following concepts: setting-up of inner versus outer space, contact boundary, excitability boundary and containing function. **Methods:** In weekly meetings at the Center of Obesity and Metabolic Syndrome at the Pontifical Catholic University of Rio Grande do Sul, Brazil, our group conducted a literature review and discussed the approaches of Freud, Esther Bick, Didier Anzieu and Winnicott on the experiences of the baby with its skin while developing archaic object relationship. In doing so, we sought to reflect on the correlation between the process of gaining weight and the need to develop a second-skin. **Results:** We managed to understand the importance of the skin in the development of the functions related to containing function, excitation screen, supportability and that of sustaining the parts of the self, according to the aforementioned authors. We also regarded the significance of the maternal envelope, including the touch, as the founding element of the thinking ego (moi-pensant), which contains parts of the self and enables the development of the symbolizing capacity. Through this understanding, we were able to evaluate the role played by the thickness of the skin in obese patients—that of a need to contain parts of a poorly integrated self, which was not able to develop a notion of containing object that would allow a self-other differentiation and proper identity conformation. **Conclusion:** The need of the obese to increase the thickness of their skin (fat layer) is so often the bodily expression of their need to create a protective and restraining cover, so as to keep splitted the emotional contents from inside and outside of their emotional lives. Thus, psychotherapy aims to amplify the patients' need to connect with the loved objects, introjecting and enhancing continence functions, as if developing a new skin.

No. 156

Multifactorial Presentation of Psychotic Depression in a Refugee: A Case Report

Poster Presenter: Mehwish Hina
Lead Author: Tahira Akbar, M.D.
Co-Author: Asghar Hossain, M.D.

SUMMARY:

Background: Immigrants or refugees sustain three fold chances of developing psychosis when compared to general population. Psychiatric symptoms ranging from anxiety to overt decompensation to psychotic depression or schizophrenia can impinge deleterious effect on one's mental health especially in context of migration. Coming as a refugee from a less developed country poses great challenges to anyone and survival depends much on the extent of coping skills and social support. Underlying multifactorial etiologies precipitating psychiatric symptoms

primarily includes unemployment, financial constrains and language barriers. Refugees coming from countries with civil unrest and war carries much higher chance to decompensate. Objective: The objective of this article is to report a challenging case of psychotic depression in a Syrian refugee with underlying diagnosis of posttraumatic stress disorder (PTSD). It also emphasizes the need of adapting effective management strategy to prevent further decompensation in such patient population. Case Description: 57 yo Syrian M who sustained PTSD following an unfortunate incident where his family was killed in front of him precipitating PTSD during times of war. He was hospitalized but was partially treated for his depression and flash blacks from the event. Later, he was migrated to United States and due to numerous psychosocial stressors decompensated to psychotic depression and admitted to our facility. He was managed aggressively with antidepressants, alpha-blocker and antipsychotics with subsequent referral to individual therapy and partial program for enhancement of his coping skills. Discussion: Multiple research articles exhibit the potential of psychotic decompensation in migrants or refugees. The correlation of PTSD to psychotic depression has been a challenge in clinical practice and various resistant cases of PTSD have been reported in this regard. The additional stress of being a refugee or a migrant complicates the situation in many instances if not managed appropriately. Treatment optimization plays a pivotal role in dealing with recurrent flashbacks from PTSD and prevents culminating into psychotic depression. Our case emphasizes the significance of effective management of any co-existent psychiatric disorders in migrants, which could potentially lead to more florid symptomatology if not promptly treated. Conclusion: The main emphasis of this case report is to highlight the multifactorial aspects of psychotic depression in migrants or refugees. PTSD has been a growing challenge in such population, and if not treated promptly may culminate into various psychiatric symptoms. In this case report, a Syrian refugee who was inadequately treated for his depression and PTSD, when migrated to United States decompensated to psychosis. This substantiates the importance of adequate treatment and enhancement of coping skills to negate further deterioration of psychiatric symptoms in such cases.

No. 157

Management of Treatment-Resistant Posttraumatic Stress Disorder (PTSD): A Systemic Review

Poster Presenter: Mehwish Hina
Lead Author: Tahira Akbar, M.D.
Co-Author: Asghar Hossain, M.D.

SUMMARY:

ABSTRACT: Posttraumatic stress disorder (PTSD) is increasingly common psychiatric disorder today impacting more than 10 % of population across United States. Various etiological factors can precipitate its symptoms ranging from abuse to sustaining horrific events during war times. Frequency of flash backs can be an index of stratifying severity of disorder as its affect functional status of the patient. SSRI primarily paroxetine and sertraline are the recommended (FDA-approved) anti depressants which have shown efficacy in various clinical trials. Maintenance treatment for 6-12 months decreases chances of relapse significantly. In most cases, pharmacotherapy with antidepressant is safe and effective; however, in selective cases patient fail to respond to it challenging physician to consider alternative treatment modality. Recently mood stabilizers, antipsychotics and alpha-blockers have been used in resistant cases. These medications primarily used as augmentative treatment modality along with antidepressants to improve the outcome of the illness. Among them prazosin (alpha blocker) is a well-tolerated medication which helps alleviating nightmares and flashbacks in patient experiencing PTSD. Doxazosin has the advantage over prazosin because of its long half-life. These alpha-blockers also help in sleep and reduce patient's hypervigilance. Numerous patients also experience overwhelming anxiety attributable to frequent nightmares and flashbacks prompting intervention with anxiolytics. Short course of benzodiazepines has a good effect on symptomatology in initial phase of PTSD. Psychotherapy has also significant role in managing this disorder. Cognitive Behavioral Therapy (CBT) is very instrumental and may require fine expertise of the practitioner. Trauma focused psychotherapy for posttraumatic stress disorder has shown very promising result especially when combine with pharmacotherapy. Prompt and

effective treatment of PTSD is very imperative to minimize the impact of illness on patient's social functioning and untreated cases may lead to significant psychiatric issues like major depression, panic disorder and psychosis. Untreated PTSD may also have deleterious consequences and could precipitate serious mental health crisis including suicide. Augmentative strategy with combination regiment along with trauma-focused psychotherapy is cormer stone of management in resistant cases of PTSD primarily in veterans.

No. 158

"I Can't Breathe": The Case of Factitious Disorder in 65-Year-Old Woman With Multiple Admissions

Poster Presenter: Asa L. Cheesman, M.D.
Co-Authors: Sina Shah, M.D., Raj V. Addepalli, M.D.

SUMMARY:
This case presents a 65 year old woman, who on initial presentation was complaining of multiple somatic symptoms. She was in obvious distress, breathing rapidly, moaning, difficult to engage. Also repeatedly reporting shortness of breath, inability to swallow, leg weakness, abdominal pain and constipation. Patient has had multiple previous medical admissions in multiple hospitals within the past 8 months with similar presentation. She was last admitted to another hospital one month prior and full workup for shortness of breath, chest pain, cough, dysphagia, UTI and bronchitis was done. Possible diagnosis of Somatic Symptom Disorder was made and patient was lost to follow up. She was admitted to psychiatry inpatient at a different hospital due to her persistent amplification of nonspecific somatic symptoms, lack of supportive physical findings, apparent anguish, refusal to eat or drink and her continued evasiveness during evaluations. Lack of clear objective markers made it difficult to diagnose the patient, therefore, Somatic Symptom Disorder and Delusional Disorder were considered. She responded to Olanzapine 5 mg at bedtime and supportive therapy. Exacerbation of symptoms with the presence of a physician, inconsistent compliance and response to treatment, no prominent secondary gain and excessive clinical history contributed to the diagnosis of Factitious Disorder. This stresses the importance of close observation, obtaining collateral information from family and previous admissions to make the diagnosis of Factitious Disorder.

No. 159

Use of Fluvoxamine Augmentation for Relief of Clozapine-Induced Constipation

Poster Presenter: Sina Shah, M.D.
Co-Author: Raj V. Addepalli, M.D.

SUMMARY:
This is a case of a 38 year old woman with psychiatric history of schizoaffective disorder on clozapine who presented to our hospital complaining of severe constipation, depression, and command auditory hallucinations to kill self. The patient was admitted to the inpatient psychiatric unit and continued on clozapine treatment. While perceptual symptoms resolved shortly after administration of clozapine 550 mg/day, symptoms of depression and constipation persisted. Despite administration of multiple stool softeners and bowel regulating agents, there was little improvement of constipation, causing the patient significant distress. Medical and Gastroenterology consult team recommendations for relieving constipation included discontinuation of clozapine due to the antimuscarinic side effects. The patient was reluctant to discontinue clozapine, as trial of other antipsychotics had failed in the past, and clozapine was the only agent that effectively treated her psychiatric symptoms. Augmentation of clozapine with asenapine 10 mg/day helped in resolution of psychiatric symptoms. Subsequently the dose of Clozapine was reduced to 250 mg/day, and fluvoxamine 100 mg/day was added to the regimen. This allowed the substantial reduction of clozapine dosage and maintenance of therapeutic clozapine levels and subsequent improvement of debilitating constipation. We discuss our strategy to ameliorate the antimuscarinic effects of clozapine and improving compliance by decreasing dosage of clozapine. This was primarily achieved by making use of the drug interaction of fluvoxamine with clozapine in a beneficial way. Fluvoxamine inhibits cytochrome P450(CYP)1A2 for which clozapine is a substrate, and results in maintenance of therapeutic levels of norclozapine and total clozapine levels at lower doses of clozapine. The outcome in our case was relief of severe constipation along with resolution of

psychotic symptoms by ameliorating the antimuscarinic effects of clozapine using its drug interaction with fluvoxamine.

No. 160

Successful Benzodiazepine Dose Reduction in Elderly Patient With Anxiety, Depression, and Multiple Medical Comorbidity

Poster Presenter: Soyoung Lee, M.D.

SUMMARY:

Patient is a 90-year-old female with a long-standing anxiety and depressive disorder who has been in treatment for 50 years. Patient has tried multiple medications, including different types of antidepressants, anxiolytics, mood stabilizers, and antipsychotics over the past 50 years. Currently, she is taking clonazepam 1mg PO TID for anxiety and nortriptyline 25mg PO nightly for depression and anxiety. She reports chronically depressed mood and anxiety that have been moderately well-controlled with her current regimen. Her presentation is further complicated with bilateral upper extremity tremor that worsens with anxiety, chronic musculoskeletal pain that requires narcotic pain medication: Percocet 10mg PO TID, recent falls, and worsening memory over the past decade. She needs assistance in some of her IADLs and ADLs due to her physical disability. MOCA test showed her cognitive function is compromised (MOCA = 22/30). Given her advanced age that makes her prone to have medication side effects especially from the concomitant use of benzodiazepine and narcotic pain medications, also with concerns of cognitive decline, plan was made to reduce the dose of clonazepam and to eventually discontinue. Patient understood the risks of using benzodiazepines and agreed with the plan. Initially, her current use of clonazepam was thoroughly assessed. She takes clonazepam 1mg TID, and she requires additional dose for severe anxiety occasionally. Counseling and psychoeducation were provided to build a rapport and to motivate the patient to actively participate in treatment plan. Gabapentin 100mg PO daily was added to help her anxiety symptoms. She was instructed to take gabapentin for severe anxiety. After 2 weeks, she reported that she cannot tolerate gabapentin because of feelings of dizziness and imbalance. She adhered to the TID dosing of clonazepam although she had to stop gabapentin. Afterwards, she continued to follow the tapering schedule that reduces the clonazepam by about 15% per month. During the tapering schedule, her mood has been stable without worsening depression. Supportive psychotherapy and psychoeducation was provided on every visit to relieve anxiety. A calendar table was made for her to record her clonazepam use, which motivated and improved her compliance. After 4 months, she is stable on clonazepam 0.5mg PO BID. Our plan is to continue to reduce and to discontinue it. Benzodiazepine use in elderly is very common in the current medical practice and it can cause significant side effects. To treat anxiety in elderly, each case needs to be thoroughly assessed in different aspects, such as psychological, neurocognitive, medical, and social. In our case, we were able to reduce the dose of benzodiazepine successfully using diverse treatment modalities, including alternative medication, supportive psychotherapy, psychoeducation, and utilizing reward system.

No. 161

Falling on Deaf Ears: A Case of Functional Hearing Loss in Outpatient Psychiatric Treatment

Poster Presenter: Ruby H. Barghini, M.D.
Co-Author: Aurelia Nicoletta Bizamcer, M.D., Ph.D., M.P.H.

SUMMARY:

Mrs. A., a 55 year-old Caucasian nurse with history of depression, presented to our outpatient psychiatric clinic on referral from ENT. The patient had experienced an acute onset of hearing loss after a viral upper respiratory infection and an unintentional overdose of her pain medication. Thorough otolaryngologic investigation revealed a discrepancy between the subjective and objective evidence for hearing loss. Mrs. A. was presumed to be suffering from a functional hearing loss and referred to psychiatry for further management. Her psychiatric evaluation revealed several psychosocial contributors to the development of her condition. The literature is sparse regarding psychiatric case studies and management of functional hearing loss. We have chosen to apply characteristics from the general management of psychosomatic patients. Treatment sessions are conducted via an audio

translator application on the patient's cell phone. Mrs. A has been engaged in her weekly therapy sessions in conjunction with medication management of her depressive and anxious symptoms with sertraline. Treatment goals include the resolution of conflict and grief from multiple losses, including her hearing and sense of control, and resumption of meaningful employment. In this poster, we will present a review of the literature regarding the etiology and treatment of functional hearing loss and create a psychodynamic formulation of the case.

No. 162

Urophagia as Pica in a Patient With Schizophrenia

Poster Presenter: Eduardo J. Rodriguez-Perez, M.D.

SUMMARY:

INTRODUCTION The drinking of urine by humans has existed in several forms for centuries. Here we discuss the case of a patient with Schizophrenia who recounted his peculiar habits of drinking his own urine. We then discuss the possible diagnoses that can be considered in patients with this behavior, including pica and undinism. This is followed by a review of historical trials of urea therapy, and the exploration of socio-cultural and spiritual associations with urine consumption. CASE Patient was a 28 year-old man, with Schizophrenia and a history of substance use, on AOT, followed by ACT, admitted to inpatient psychiatry for aggressive behavior in the context of medication non-adherence. After stabilization of aggression, patient began discussing his ritualistic consumption of his own urine. He described that the idea came to him "in a spirit" and that his "body started calling for it." He reported consuming 8 ounces of his own urine daily, after "treating it" with herbs and baking soda to "get rid of microbes." He believes that drinking his own urine cures various ailments, including pain, nasal congestion. While he denied drinking urine during his admission, he planned on resuming urine consumption, which he believes will help him stop taking his psychiatric medication in the future. DISCUSSION There is little evidence on the prevalence of urine consumption, predominantly taking the form of case reports. Some authors have investigated the potential dangers of urine consumption, particularly to the exposure to drug-resistant bacteria, with some evidence of potential effects on the liver and kidneys. Urea therapy has been investigated in the past, specifically in relation to the treatment of cancer, but was found ineffective. Urine consumption is additionally a component of various cultures and religious sects dating back over 5,000 years. It has been used as traditional medical diagnosis and treatment before the age of modern medicine. And some positive associations have been seen in animal studies recycling urine under certain situations. The differential diagnoses of urophagia includes pica, which is the consumption of non-nutritional items, and undinism, which comprises several different fetishes involving urine. Some authors suggest disordered eating has a higher prevalence in patients with psychiatric disorders, and should be screened for more consistently. CONCLUSIONS Here we discussed the case of a 28 year-old man with Schizophrenia, who discussed an intricate ritual of consuming his own urine. The patient's presentation is most consistent with a DSM 5 diagnosis of pica. There was no indication in this patient that urophagia served an erotic or sexual function, nor did he identify a religious context to the behavior. While there is mixed evidence about the potential risks of urine, there is a potential benefit of screening patients with Schizophrenia for eating disorders.

No. 163

Group Psychotherapy: Depression and Anxiety Education Group

Poster Presenter: Anthony Kelada, M.D.

SUMMARY:

Based on previous studies suggesting that a psychoeducational group can help patients comply with treatment for depression, we established a group in an outpatient setting which focuses on educating patients about depressive and anxiety symptoms, causes, treatment and the importance of compliance. This outpatient group was adapted from ana similar depression group that was developed for the hospital's inpatient unit. The original inpatient group initially began as a resident run quality improvement project with aims of helping hospitalized psychiatric patients learn more about treatment and management of depression and

follow up with outpatient caret. Positive feedback from patients who attended the inpatient group showed that patients liked the information and discussion aspect of the developed topics. This outpatient group has two leaders, a third-year psychiatry resident and a psychology intern. It consists of 9 one hour sessions. Two sessions focus on depression, two on anxiety, one on sleep hygiene, one on psychological factors of taking medication, one on grounding techniques, one on symptoms and how they may affect interpersonal relationships, and the final session on symptoms and how they can be addressed using cognitive behavioral therapy. Once all the sessions have been completed, it begins again from session number one. Patients who are enrolled in the clinic are welcome to begin attending the sessions at any point in the group. This outpatient group is an integration of psychoeducational and group processing, allowing patients to say whatever comes to mind yet providing the leaders with outlines to redirect the group when necessary. It is meant to be an adjunct treatment to the individual psychotherapy and pharmacological care that they are already being provided in the clinic.

No. 164

Symbology in Frida Kahlo's Work

Poster Presenter: Beatriz Quintanilla Madero, M.D.

SUMMARY:

Introduction Frida Kahlo (1907-1954), a famous Mexican 20th Century visual artist, reflected her own life and suffering in her paintings. She has become an icon for many people, and her work has been endlessly reproduced in all kind of materials, even in pins, t-shirts, bags and other objects. She used direct and understandable visual symbols, which allow people to connect easily and emphatically with her message, her suffering and her anguish, even if they do not know anything about her life. She was married to Diego Rivera, a famous Mexican painter. Objective: To understand her illness through the symbology used in her work. Material and Method Four major Frida Kahlo's paintings: "Miscarriage", "Tree of Hope", "Broken Column" and "The Accident", are analyzed under a psychopathological point of view. Results: Many symbols of suffering, pain and illness are represented, such as broken leg, broken spine, tears, blood, a fetus and an abortion, nails piercing all her body. The viewer can understand the nature of the event the painter has drawn, and how she was psychologically affected. Symbols of anguish, pain, loss, distress and misery are found, along with sadness, depression and self-pity. Symbology used is direct and simple. Suffering is expressed in a very vivid way. All symbols are self-referenced. Narcissistic elaboration is found in a neurotic fashion. There are no signs of psychotic thoughts, neither psychotic symbology. Discussion and Conclusion Symbology of psychological suffering and pain are represented in a direct form in an expressive style. The author tries to make clear the nature of her pain and feelings and how important these events are in her life. Expressing these events through her paintings might have had a cathartic effect that helped her to cope with suffering and as a way to make others understand how she felt. These characteristics have make her to be well known and loved by millions of people around the world. And to become an icon for millions of people

No. 165

Comorbidity of Depression and Anxiety Disorders and Cystic Fibrosis: A Retrospective Data Analysis

Poster Presenter: Colleen McGavin Leitner, M.D.
Co-Author: Vishal Madaan, M.D.

SUMMARY:

Title: Impact of depressive and anxiety symptomatology in individuals with Cystic Fibrosis: A 15-year retrospective data review study Authors: Colleen Leitner, MD, Monica Periasamy, MPh and Vishal Madaan, MD Introduction: Cystic fibrosis (CF) is one of the most common genetic disorders in the Caucasian population, with conservative estimates at around 100,000 patients worldwide. A large international study recently found elevated rates of both depression and anxiety in individuals with cystic fibrosis (CF) compared with healthy individuals. Elevated symptoms of depression were reported in 10% of adolescents and 19% of adults, while elevated anxiety symptoms were found in 22% of adolescents and 32% of adults. Research also suggests that depression and anxiety in CF may be associated with worsening lung function. Several recent studies have also linked depression in CF with poor treatment adherence as well as longer hospital stays and increased healthcare utilization. Objective:

The study was conducted to review de-identified data of individuals with CF over 15 years to examine the prevalence of depression and anxiety in our patient population. In addition, the investigators looked at the data to determine if depression and anxiety led to increased healthcare utilization and served as moderators for other factors such as frequency of inpatient visits and duration of hospitalization. Methods: De-identified data was collected from the University of Virginia's Clinical Data Repository (CDR). The CDR is a database that has collected clinical data based on billing codes. Parameters included patients with a diagnosis of CF from the years 1992-2016 seen on an inpatient and outpatient basis. A subset of patients with diagnoses of depressive or anxiety disorders was compared to the entire CF population in terms of their impact on several available parameters. Results: Of the 1375 CF patients, 145 (10.5%) CF patients had documented diagnoses of anxiety or depression. These patients had more frequent inpatient visits, longer hospital lengths of stay, and higher overall hospital cost than the CF patients without depression or anxiety diagnoses . The data points to a need for regular screening for anxiety and depression symptoms in the CF population in order to optimize patient outcomes as well as minimize healthcare costs.

No. 166

Central Serous Chorioretinopathy and MDD: Is There a Link?

Poster Presenter: Aamani Chava, M.D.
Co-Authors: Zohaib Majid, Shabber Agha Abbas, Asghar Hossain, M.D.

SUMMARY:

Introduction: Central serous chorioretinopathy (CSC) is an idiopathic disease affecting mostly Caucasian men between the ages of 20-50. It is characterized by serous detachment of the retina in the macular region of the eye due to a focal retinal pigment epithelial defect. Patients typically complain of blurred vision, central scotoma, micropsia, or metamorphopsia. Apart from medical risk factors, impulsivity, overachievement, emotional instability, psychological stressors, and use of psychopharmacologic agents have each been identified as potential risk factors. Objective: The objective of this article is to report a case of new-onset major depressive disorder with psychotic features in a 48-year-old patient with a recent diagnosis of CSC. Case: 48-year-old Caucasian male with no documented past psychiatric history or hospitalization was brought to Bergen Regional Medical Center by EMS for psychiatric evaluation after he made suicidal threats that were reported by his wife. According to her, his symptoms began three weeks ago when he was diagnosed with CSC and gradually worsened thereafter. Prior to the diagnosis he had been very concerned about his failing business and regarding a recent home purchase he had made. Over the duration, he became more isolative and withdrawn, often locking himself in his office while perseverating about the three stressors. Few days prior, he reportedly was isolated, detached, and was endorsing depressive symptoms of avolition, anhedonia, poor concentration, insomnia, decreased appetite, and self-injurious behavior. Since then he reportedly began exhibiting worsening depressive symptoms and disorganized behavior. Most recently, he was observed sitting in the dark only responding to internal stimuli, was not responding to verbal redirection, and was making verbally aggressive statements. In the emergency department he was started on sertraline 50 mg qd and was admitted for observation. Discussion: Review of available literature has indicated that psychosocial stressors either trigger CSC, are an important risk factor for its development, or perhaps both. The association of CSC with type A personality individuals is also observed. Psychosomatic complaints, unfavorable stress coping strategies, and elevated tension, aggression, emotional instability, and achievement orientation have all been identified as potential precursors. Many of these psychiatric difficulties were present in our patient prior to his onset of CSC. It would be interesting to know whether there exists a causal relationship between psychiatric precursors and the development of CSC or do psychiatric symptoms represent a manifestation of CSC pathology or is there a larger syndrome that is definable. Conclusion: Further research is required to explore the potential relationship between CSC onset and the development of new-onset psychiatric symptoms. Our case report may serve as preliminary evidence for such a correlation.

No. 167

VNS-Associated Psychosis: A Case Report

Poster Presenter: Aamani Chava, M.D.
Co-Authors: Naveed Butt, Asghar Hossain, M.D.

SUMMARY:

Introduction: Epilepsy is most commonly treated with antiepileptic drugs however, 30% of patients do not respond to adequate pharmacological treatment and are considered refractory (Kwan, Brodie, 2000). Vagus nerve stimulation (VNS) is a neurophysiological treatment for refractory patients and is designed to prevent seizures by sending regular, mild pulses of electrical energy to the brain via the vagus nerve. Case Report: We present a case of a 54-year-old male who came to the emergency room with disorganized behavior, paranoid persecutory delusions, and hallucinations. The patient had a history of seizure disorder secondary to a TBI. His seizures were well controlled with vagus nerve stimulation device but recently he underwent battery replacement and device was calibrated to control his increased frequency of seizures. He developed psychosis afterwards. Discussion: VNS is most commonly achieved by surgical implantation of a stimulating, current-carrying wire around the vagus nerve in the left side of neck. The wire is intermittently stimulated by a battery-operated generator that is implanted in the left chest wall under the skin. The device is set to give stimulation at regular intervals during the day, usually with 30 seconds of stimulation alternating with 5 minutes of no stimulation. Settings also called stimulation parameters can be adjusted by the neurologist to control the patient seizures. Clinicians need to be aware of the paradoxical possibility that normalization of EEG and reduction of seizure activity may be followed by the appearance or exacerbation of psychosis. It is estimated that 7–10% of patients with seizure disorders suffer from psychotic symptoms. The psychotic symptoms commonly reported are hallucinations, delusions, and prolonged euphoric states. It was observed that some of these symptoms tend to occur after marked reduction in seizure frequency and normalization of the electroencephalograph. Although many studies reported increased alertness and reduced sedation after VNS but there are case reports demonstrating the induction of psychotic symptoms following seizure control with VNS. Veerle de herdt et al,(1) presented a case series to study the emergence of psychotic symptoms after treatment with VNS for epilepsy. Their study described four patients who were treated with VNS after failure of response to antiepileptic drugs and were subsequently treated with VNS. During the ramping-up procedure of the output current, all four of these patients presented with psychotic symptoms. Conclusion: Further investigation and observation will be needed to establish the underlying mechanisms of these psychotic symptoms during VNS and to investigate which patients may be specifically sensitive for the development of such conditions.

No. 168

Psychiatric Comorbidities and Related Outcomes in Epilepsy Patients: An Insight From Nationwide Inpatient Analysis in the United States

Poster Presenter: Rikinkumar Patel
Co-Authors: Ahmed Z. Elmaadawi, M.D., Zeeshan Mansuri, Mandeep Kaur, Kaushal Shah, Suhayl Joseph Nasr, M.D.

SUMMARY:

Background: Psychiatric disorders are frequently encountered in patients with epilepsy. These may negatively influence the course of epilepsy. To the best of our knowledge this is the first study to report the impact of various psychiatric comorbidities in Epilepsy patients regarding hospitalization outcome. Methods: We used the Nationwide Inpatient Sample (NIS) from the Healthcare Cost and Utilization Project (HCUP) for the years 2013-2014. We identified Epilepsy as the primary diagnosis and used AHRQ comorbidity software to generate binary variables that identify the following psychiatric comorbidities: alcohol abuse, depression, drug abuse and psychosis using validated ICD-9-CM codes. Pearson's chi-square test and independent sample T-test were used for categorical data and continuous data, respectively. Differences in comorbidities were quantified using Chi-Square tests. Multinomial logistic regression model was used to quantify associations among comorbidities and inpatient mortality, length of stay and inpatient charge (adjusted Odds Ratio (aOR)). Discharge weights were applied in all regression models, and all estimates

were adjusted for age, gender, race, and median income of the patient's zip code, hospital bed size, and location, region and teaching status. All statistical analyses were done using SPSS 22. Results: The sample consisted of 397,440 hospitalizations for Epilepsy. The mean length of stay was 3.83 days and the mean total charge was $35,973.70. The in-hospital mortality rate was 0.7%. Psychiatric comorbidities were identified in 39.9% of inpatients with epilepsy including 13% with depression, 10.4% with psychosis followed by alcohol abuse (8.7%) and drug abuse (7.8%) Relative to the other psychiatric comorbidities, the risk of inpatient death was only seen in Epilepsy patients who had comorbid alcohol abuse (aOR 1.164; p = 0.007). Also compared to the other comorbidities, depression was associated with a higher risk of length of stay of more than 3 days (aOR 1.473; p <0.001) and higher total charge of >$21,000 (aOR 1.242; p<0.001), followed by psychosis (aOR 1.290; p<0.001) and higher inpatient cost of care (aOR 1.071; p<0.001). Comorbid drug abuse did not have an increased risk of the length of stay of more than three days (aOR 0.833; p<0.001). Comorbid alcohol abuse did not have an increased risk of inpatient total charge > $21,000 (aOR 0.926; p<0.001). Conclusion: In a large sample of hospitalizations for Epilepsy, four psychiatric comorbidities were associated with significant differences in the risk of death, length-of-stay, and inpatient total cost. Early diagnosis and treatment of comorbid psychopathology can save lives, lower length of hospital stay and subsequently the cost of care.

No. 169

Impact of Depression on Hospitalization and Related Outcomes for Parkinson's Disease: A Nationwide Inpatient Sample-Based Retrospective Study

Poster Presenter: Rikinkumar Patel
Co-Authors: Amit Chopra, M.D., Ramkrishna D. Makani, M.D., M.P.H., Zeeshan Mansuri, Upenkumar Patel, M.B.B.S., M.P.H., Rupak Desai, M.B.B.S.

SUMMARY:

Background: Major Depressive Disorder (MDD) is a common comorbidity in Parkinson's disease (PD) and it significantly affects the quality of life and disease outcomes in PD patients. Previous studies were done to measure prevalence, neurobiology, and impact on health related quality of life in PD patients with depression. No studies have been conducted to our knowledge to address the health care utilization and its outcomes in PD patients with MDD. This study analyzes and discerns the differences in the hospitalization outcomes, comorbidities, and utilization of procedures in PD patients versus PD patients with MDD. Methods: We used the Nationwide Inpatient Sample (NIS) from the Healthcare Cost and Utilization Project (HCUP) from year's 2010-2014. We identified PD and MDD as a primary and secondary diagnosis respectively using validated International Classification of Diseases, 9th Revision, and Clinical Modification (ICD-9-CM) codes. Pearson's chi-square test and independent sample T-test were used for categorical data and continuous data. All statistical analysis was done by SPSS 22.0 in this study. Results: Extensive analysis was performed on 63,912 patients with PD and 1445 patients with PD having MDD. PD with MDD patients had three times greater chances of disposition to acute care hospital (3.1% vs. 1.1%, p<0.001). Median length of hospitalization was higher in PD with MDD patients (5.85 vs. 4.08 days; p<0.001) though the median cost of hospitalization was low ($31,039 vs. $39,464; p <0.001). Utilization of Therapeutic Nervous system procedure was lower in PD with MDD patients (29.9% vs. 59.5%; p<0.001). Diagnostic procedures like CT-scan, MRI and diagnostic spinal tap were performed more in PD with MDD patients (5.5%, 6.6% and 3.4% respectively) compared to PD patients (4.2%, 2.8% and 2.5% respectively)(p-value<0.001). Utilization of Deep Brain Stimulation was lower in PD patients with MDD (9.4% vs. 25.6%, p<0.001). PD with MDD patients had about twice greater risk of major or extreme loss of function as compared to PD patients due to which they were at greater probability of dying (p<0.001). In-hospital mortality was significantly higher in PD patients with MDD (1.4% vs. 1.1%; p<0.001). Comorbidities present in PD with MDD patients are Alcohol Abuse (3.7%), Psychosis (100%) and Drug Abuse (5%) compared to 1.4%, 0 %, and 0.8% respectively in PD patients (p-value<0.001). Conclusion: Our study establishes the negative impact of depression in PD in terms of hospitalization related outcomes including the illness severity, comorbid conditions, risk of mortality, utilization of diagnostic and

therapeutic procedures, length of stay and disposition as compared to PD alone. Further research to guide development of clinical care models for targeting identification and treatment of depression in PD are warranted to both reduce mortality and morbidity and improve quality of care in PD with MDD.

No. 170

Investigating the Association Between Inflammation and Depression

Poster Presenter: Anjali Thakrar, M.D.

SUMMARY:

Background: Depression is the leading cause of morbidity worldwide. A significant number of patients remain refractory to current treatment modalities. Therefore, it is pertinent to further understand the pathophysiology of depression and additional clinical correlates in order to investigate additional treatment modalities. Several studies have suggested that inflammation plays a role in the pathogenesis of depression. The aim of this paper is to further elucidate the association between inflammatory markers and depression. Methods: A literature review was conducted using a combination of key terms “depression”, “inflammation”, “cytokines”, “prostaglandins”, and “interleukins”. Results: Rates of depression have been shown to be higher in patients with chronic inflammatory disorders compared to the general population. Several studies have found that depressed patients have elevated serum inflammatory cytokine levels, which are correlated with depression severity. Other studies have demonstrated that administration of cytokines produces depressive symptoms. Furthermore, anti-depressive treatments have been shown to reduce serum cytokine levels. Conversely, anti-inflammatory agents may have anti-depressive effects. Conclusion: Inflammation is correlated with depression. Further studying this association along with the temporal association may help elucidate the framework for novel treatment options.

No. 171

Delirious Mania in a Geriatric Patient

Poster Presenter: Anjali Thakrar, M.D.

SUMMARY:

Delirious mania (DM) is a potentially fatal neuropsychiatric syndrome of unknown etiology, often characterized by the acute onset of delirium, symptoms of mania, and psychosis. The presentation is often punctuated by catatonia. DM is estimated to occur in 15-20% of patients with bipolar disorder specifically during episodes of mania. Despite being a relatively common entity, literature is sparse and there are no formal diagnostic criteria or treatment guidelines. We report a case of a 71-year-old patient with a previous diagnosis of bipolar disorder. At the baseline, the patient was fully oriented and independent with activities of daily living. The patient presented with acute onset of worsening confusion, insomnia, increased goal directed behavior, impulsivity, agitation, and bizarre delusions. Initial investigations, including UA, CT head, CBC, and BMP returned normal. Given the presentation with symptoms of mania, psychosis and fluctuating sensorium, the patient was diagnosed with DM. ECT was considered, however, family declined. The patient was treated with a combination of valproic acid, olanzapine, and lorazepam. Symptoms improved on this regimen and the patient was discharged 26 days after admission. This was her second episode of DM, suggesting that some patients may be at risk for recurrent episodes. ECT is considered to be the definitive treatment for DM. Lorazepam has also demonstrated efficacy. Our patient responded to moderate doses of lorazepam, valproic acid and olanzapine, however, recovery from the acute episode was protracted. Early diagnosis and aggressive treatment may be essential to reduce the morbidity and mortality associated with DM.

No. 172

Management of Acute Mania in a Peripartum Patient

Poster Presenter: Bao M. Vo, D.O.

SUMMARY:

Mrs. A is a 35-year-old G2P1001 woman at 37w3d of pregnancy with past psychiatric history of Bipolar I Disorder, who presented to the psychiatric consult service with aggressive behaviors, throwing her body around with no regard for her unborn child and requiring restraint with handcuffs. She was actively psychotic, speaking to her daughter who was not

present during her initial interview. She has a history of eight manic episodes occurring annually, each of which required hospital admission before achieving stabilization seven years ago. However, she stopped taking all her medications when she learned she was pregnant. There were no complications with the pregnancy initially, but in the week before her hospital presentation, she developed insomnia, sporadic eating habit, inadequate fluid intake, and hyper verbality with rapid speech. Complicating her history was a prior cesarean delivery for failed induction of labor, as well as previous post-partum depression. The obstetrics service was consulted before her transfer to the psychiatric floor. She was deemed to have a maximum of two and one-half weeks until her delivery via cesarean section. Before and during her acute episode of mania, she expressed the wish to attempt a normal vaginal delivery. She required a team of psychiatrists, obstetricians, anesthesiologists, ethicists, as well as a strong supporting medical cast. Her case presents multiple challenges involving the capacity to make medical decisions, management of acute mania during late stage pregnancy, and ultimately securing the health of the patient and her child.

No. 173

Fear as a Manic Trigger: A Case Report

Poster Presenter: Becky Wu, M.D.

SUMMARY:

The patient is a 23-year-old female who was involuntarily hospitalized on an acute inpatient psychiatric service with delusions, pressured speech, flight of ideas, religious preoccupation and lack of need for sleep. She was in an acute manic state with psychosis. She was started on valproic acid for mania, aripiprazole for psychosis, and lorazepam for agitation. The patient stabilized on valproic acid (total of 750 mg/day, level 86) and aripiprazole (20 mg/day). She became more coherent; her speech was less pressured; and she was not articulating delusions. Given the improvement, discharge was planned. Aripiprazole long-acting injectable was discussed with the patient. She expressed fearfulness about the injection, but she reluctantly accepted it nonetheless. Within 24 hours of receiving the injection, the patient decompensated. Manic and psychotic symptoms recurred and led to a prolonged hospital course. In an effort to control these symptoms, the medication regimen was changed to haloperidol, lithium and lorazepam, all in liquid form. Gradually, the patient again improved. She accepted haloperidol decanoate and was stable at discharge. In this poster, we discuss triggers of mania as well as dysregulations in neural circuits as possible predisposing vulnerabilities to an acute episode. To our knowledge, this is the first case of fear as a trigger of mania in a hospitalized patient.

No. 174

Is There a Correlation Between Urinary Tract Infections and Manic Episodes? A Literature Review

Poster Presenter: Brent Jakubec, M.D.

SUMMARY:

Background: Urinary Tract Infections (UTIs) are among the leading reasons for treatment in adult primary care medicine, and are accountable for a considerable percentage of antibiotic prescriptions. The lifetime prevalence of Bipolar Disorder (BD) is 1% in the United States (US), and the 18th leading cause of disability. The purpose of this paper is to review current literature on UTIs, and their association with manic episodes in individuals with an established diagnosis of BD. Methods: A literature review using, but not limited to, the following key terms “UTI Mania; Infection Bipolar Disorder”. DSM5 Criteria were used in defining a manic episode. UTI was defined as a dipstick urinalysis positive for leukocyte esterase, ? 5–10 leukocytes on urine microscopy, and/or nitrates. Results: Searches yielded 1,216 articles, of which 13 were chosen. Selection criteria was based on relevance of the article to affective or psychotic symptoms in the setting of a UTI. Discussion: Although mania is commonly associated with Bipolar Disorder (BD), it can have many other non-psychiatric etiologies. Inflammation and maternal or fetal infections have been suggested as risk factors for schizophrenia (SZ) and BP, as well as for suicide. One study showed that any history of hospitalization for infection increased the risk of later mood disorders by 62%, and that a prior hospital contact, because of autoimmune disease, increased the risk of a subsequent mood disorder diagnosis by 45%, demonstrating that the number of infections and autoimmune diseases increases the risk of mood disorders in an exposure

response relationship. In addition, patients requiring hospitalization for an infection, had an increased risk of death by suicide. Exposure to physical or psychologic stressors is known to increase the risk of acquiring infections, and enhances immune responses. Patients may report episodes of stress preceding the development of mood disorders, and the inflammatory response might simply be a parallel finding, and not just a causal relationship. The clinical course of a neuropsychiatric disorder may be precipitated or exacerbated by a UTI. Conclusion: In examining the question on whether there is a correlation between UTIs and mania or not, this literature review, at least, suggests that the clinical course of a neuropsychiatric disorder may be precipitated or exacerbated by a UTI. Other recent research has shown that there is a link between the development of mood disorders and inflammation, along with elevated CRP levels in patients with BD, as well as an increased risk of suicide in patient hospitalized for infections. Combination therapy of psychotropic medications and antimicrobials, in this clinical picture, likely improves symptoms. However, treatment with select antimicrobials has an increased risk of developing mania.

No. 175

Divalproex and Lithium Combination Treatment in Bipolar Disorder

Poster Presenter: Chandan Samra
Co-Author: Sarayu Vasan, M.D., M.P.H.

SUMMARY:
Background: Bipolar is a common mood disorder characterized by episodes of mania, depression, or mixed symptoms. Manic symptoms include distractibility, grandiosity, flights of ideas, racing thoughts, increased goal directed activity, decreased need for sleep, excessive talking or pressured speech, and increased sexual desire. Depressive symptoms in bipolar disorder include sad mood or anhedonia with decreased energy, lack of focus and concentration, overwhelming guilt, hopelessness and suicidal ideations. The treatment for bipolar disorders has been extensively researched over the years, revealing mood stabilizers such as lithium and divalproex and atypical antipsychotics to be the most effective. The combined use of a mood stabilizer along with an atypical antipsychotic is a common practice whereas the use of two mood stabilizers is infrequent. The role of any medication is to reduce symptoms, prevent relapses and recurrences, and provide long term stability. However, in this literature review, we look at the possible benefits such as a decrease in relapse and increase in remission by using the combination of lithium and divalproex. Methods: A literature search was performed using PubMed and Google Scholar. The search was completed by using the following medical subject headings and their derivatives: “lithium,” “Depakote,” ‘divalproex,” “combination of lithium and divalproex,” “mania treatment,” “benefits of lithium and divalproex,” “lithium and divalproex versus atypical antipsychotics.” We limited our search to human subjects. Results: A few studies have been conducted that suggest the benefits of combined usage of lithium and divalproex. Although, the study samples were small, many of these studies concluded that patients on the combined regimen had a decrease in relapse or recurrence when compared to lithium monotherapy. The combination use has shown to be quite effective in patients with rapid cycling bipolar disorder. Conclusion: The treatment of bipolar can prove to be challenging when the patient is not responding to monotherapy or the combined use of a mood stabilizer and an atypical antipsychotic. In such cases, the use of two mood stabilizers would prove to be beneficial. However, there are limited controlled studies done exploring the combined use of two mood stabilizers thus many clinicians abstain from using this combination. We believe this combination treatment needs to be utilized in daily practice by clinicians. In order to do so, we strongly suggest the importance of conducting research in regards to using this combination of valproate and lithium by using larger study samples and a widespread population of patients with bipolar disorder. Thorough research on this combination can prove to be very efficient in treating bipolar disorders.

No. 176

Determining the Cutoff for the Definition of Early Improvement to Predict Stable Response: A Retrospective Chart Review Study

Poster Presenter: Lee Eunsaem, M.D.

SUMMARY:

Determining the cut-off for the definition of early improvement to predict stable response: A retrospective chart review study Eun Saem Lee, MD, Hee Ryung Wang, MD, PhD, Woo Young Sup, MD, PhD, Tae Youn Jun, MD, PhD and Won Myong Bahk, MD, PhD* Objectives: This study aims to investigate whether early improvement commonly defined as 20% or more reduction of depressive symptoms after 2 weeks of pharmacotherapy could predict stable response after 4 weeks among patients with major depressive disorder (MDD). We also investigate which definition of early improvement could predict stable response most accurately. Methods: We retrospectively reviewed the medical chart records of 64 patients with MDD. Initially, we performed logistic regression analysis to investigate whether early improvement predicts stable response after 4 weeks. Further, we performed comparison of ROC curves with differing definitions of early response. Results: Early improvement defined by 20% or more reduction of 17-item Hamilton Depression Rating Scale (HAMD-17) at week 2 was significantly associated with stable response after week 4 (OR=4.451, p=0.042). Comparison of ROC curves according to differing definitions showed that early improvement defined as 15% or more reduction of HAMD-17 score at week 2 predict stable response after week 4 most accurately with sensitivity of 92.7% and specificity of 39.1% (AUC= 0.659, p=0.036). Conclusion: This study showed that early improvement defined as 15% or more reduction of HAMD-17 at week 2 could be used adequately as a predictor for future treatment response among patients with MDD.

No. 177

Neo Neuro-Chemical Dance: Bipolar Disorder I With Psychotic Features S/P VP Shunt

Poster Presenter: Harjasleen Bhullar Yadav, M.B.B.S. Co-Authors: Seema Hashmi, Jacob Elliott Sperber, M.D., Leena Mohan, M.D.

SUMMARY:

Case Presentation: 31 years old racially diverse female was referred to psychiatry for evaluation of psychosis and aggressive behavior. She had extensive comorbidities hydrocephalus gout, prediabetes, migraines, polycystic ovary syndrome, with past psych history of Anxiety, panic disorder by self report, no prior psychiatric contact, no significant substance use history, history of being raped when young (declined to elaborate further), family history of dementia. Patient had meningitis and ventriculitis, which resulted in hydrocephalus in 2014. She was initially managed with endoscopic third ventriculostomy. With no much improvement in symptoms she needed posterior fossa exploration and external ventricular drain placement and later VP shunt was placed in March 2015. Patient had VP shunt malfunction needing repeat VP shunt June 2015. While undergoing physical therapy for gait imbalance, inability to perform ADLs after surgery, she began to experience delusional episodes, auditory hallucinations in addition to exhibiting aggressive behavior. She reported hearing voices of her grandmother along with other males and females (non command type) mostly telling her to take it easy, and also believed that grandmother visited her in the hospital while no one was there. During this period, she reported increased energy, irritable mood; poor sleep, racing of thoughts. Mother of the patient being the health proxy provided most of the collateral information. Her mother described her as “Y” during the episodes of agitation and aggression referring to her other side of the personality. Mother did not confirm any prior psychiatric history. She reported history of bullying in school from 5th to 8th grade. She described herself as an anxious kid with worsening of anxiety symptoms due to her medical condition. She also reported history of episodes of panic attacks with unclear trigger, where she felt chest discomfort, palpitations, sweating but was able to relax with deep breathing exercises. Both patient and her mother reported she had some episodes of mood instability, aggression and irritability with onset s/p neurosurgeries, which was not the normal. Suicidal/ homicidal risk assessment performed. Strongly denied any suicidal, homicidal ideations, intent or plan during the interview. She denied any PTSD symptoms, OCD symptoms. She also denied any episodes of psychosis / mania in the past. She reports having memory loss and decline in cognition s/p neurosurgeries. During evaluation, MMSE was done, she scored - 23 /30, MOCA was completed X scored - 20/30. She was initially started on Valproic acid 250 mg two times a day, in addition to

Aripiprazole 5 mg once daily. Depakote had to be stopped because of excessive weight gain, and Aripiprazole was titrated up to 7.5 mg once daily to which the patient responded well, with good tolerability and no reported side effects.

No. 178

A Visual Time Perception Task From Manic to Depressed Mood in Bipolar Patients

Poster Presenter: Inki Sohn
Co-Author: Beomwoo Nam

SUMMARY:

Objectives: Time reproduction is shorter in acute manic mood than in euthymic mood is already reported by us. But it is not studied that time reproduction change from acute manic mood to depressed mood. The purpose of this study was to investigate relationship mood state with time reproduction in patients with bipolar disorder. Methods : 30 patients with bipolar I disorder(acute manic) were included. They were presented with a time reproduction task at acute manic state and following 1st, 2nd, 3rd , 6th, 9th, and 12th month. Subjects were asked to observe a light bulb “on” and “off” on a portable computer screen for 1, 11, and 36 seconds. After that, they were asked to reproduce a same length of time of a light bulb “on” and “off. We evaluated Young Mania Rating Scale(YMRS), the Hamilton Depression Rating Scale(HDRS) and the Global Assessment Functioning(GAF) of the patients. Results : They reproduced 760.4±209.7msec in acute manic mood, 977.6±108.5 msec in euthymic mood, and 1092.2±147.2 msec in depressed mood in the case of 1 second stimuli($P>0.05$). They did 9802.3±1010.4 msec in manic mood, 11200.0±790.5 msec in euthymic mood and 12909.5±980.0 msec in depressed mood in the case of 11 seconds stimuli($P<0.05$). They did 32209.2±2039.8 msec in manic mood, 36799.3±2009.9 msec in euthymic mood and 39309.5±1991.7 msec in depressed mood in the case of 36 seconds stimuli($P<0.05$). The time reproduction in manic mood were correlated with YMRS score, and it in depressed mood were correlated with Hamilton Depression Rating score. Conclusions : Time reproduction becomes longer in acute manic mood, euthymic mood and depressed mood in ascending order. So it supports the hypothesis that mood symptom severity is correlated with time perception.

No. 179

Case Report: Gambling Disorder Treated With Abilify Maintena

Poster Presenter: Najeeb U. Hussain, M.D.
Co-Authors: Brian Chang, Juvaria Anjum

SUMMARY:

27-year-old male patient with no significant past psychiatric history who first presented with suicide attempt by choking himself with a belt and threatening to cut his wrists with a knife, had gotten heavily involved in online gambling since past one year and was involuntary admitted on psychiatry unit. To begin with he was involved in small bets then after several successful months, he began to make larger bets until a few weeks prior to his suicide attempt. Collateral history from his family reported that he had recent multiple stressors. His past behavior was noted for mood swings, depressed mood since the past year, racing thoughts, and poor impulse control including large spending sprees. The patient’s final diagnosis was bipolar disorder mixed type, for which we treated with Abilify Maintena and Depakote. He had been non-compliant with oral aripiprazole on the psychiatric floor. Our poster here will be discussing how Abilify Maintena (injection form) was chosen to treat this patient due to non-compliance with oral aripiprazole. As a partial D2 agonist, aripiprazole decreases overall dopaminergic activity of the mesolimbic pathway, decreasing his perception of reward and stabilizing his impulsive behavior.

No. 180

Amoxicillin/Clavulanic Acid-Induced Mania

Poster Presenter: John Azer, M.D.

SUMMARY:

B.V. is a 53 year old male with a past psychiatric history of major depressive disorder who presented to the emergency department for altered mental status. Prior to arrival, he presented to an outpatient cardiology clinic for routine follow-up. The patient was discovered by the staff to have incoherent and rapid speech, grandiose ideation, reporting to them that he had not slept in a 3 day period. When he

presented in the emergency department, he was discovered to have significant psychomotor agitation, noticeable distractibility, increased rate of speech, intense eye contact, an affect characterized primarily by irritability, and illogical and tangential thought processes. Differential diagnosis being considered at the time was hyperactive delirium, substance-induced mood disorder, or bipolar disorder. An organic work-up was preformed and was noted to only be remarkable for a urine drug screen that was positive for marijuana, a leukocytosis at 18,500 WBC/uL, and a chest x-ray that was remarkable for heterogeneous opacities in the right base. Mini-Mental State Examination was a 23/30. He was admitted to the general medicine service with a diagnosis of hyperactive delirium. Collateral obtained from his family during the hospitalization revealed the patient was treated for a sinus infection with amoxicillin-clavulanic acid 10 days prior to admission. The family reported a temporal relationship between the patient starting amoxicillin-clavulanic acid and the change in his behavior. This case highlights the presentational overlap between delirium and mania, the importance of obtaining collateral in cases of altered mental status, and a potential iatrogenic cause of mania.

No. 181

Acute Psychosis or Kundalini Awakening? Considering Cultural Factors in the Evaluation of Psychosis

Poster Presenter: John Azer, M.D.

SUMMARY:

Kundalini awakening is a complex physio-psychospiritual transformative process resulting from deep meditation. It has been described as being accompanied by a complex pattern of sensory, motor, mental, and affective symptoms. This is the case of a 22-year-old male with no past psychiatric or medical history who presented to the emergency department for evaluation of psychosis at the recommendation of an employee of the UVA Center of Perceptual Studies. Upon initial interview, the patient reported that he had traveled from New York City to Charlottesville to be investigated by the Center of Perceptual Studies. He presented with ideations concerning for psychosis, including a reported history of out of body experiences, an experience during meditation where he visualized a light enter through his tailbone and rectum and surge up through his body, and a belief that he was being sustained by an energy that did not allow him to sleep or eat for a few days. This was accompanied by a belief that he could control his autonomic nervous system, including his heart rate and his body temperature. His mental status examination on presentation was remarkable for increased rate of speech that was interruptible, euthymic to elevated affect, and a predominantly linear and logical thought process. His workup was unremarkable outside of a urine drug screen that was positive for marijuana. The differential diagnosis at that time included schizotypal personality disorder, a substance-induced illness, bipolar disorder with psychosis, or a primary thought disorder. Once admitted to the psychiatric unit, the patient displayed no other signs concerning for psychosis. After discussion with the UVA Perceptual Studies division, the patient's presentation was thought to be consistent with a Kundalini awakening. This case highlights the importance of considering culturally influenced experiences when evaluating for psychosis.

No. 182

Lithium-Induced Autoimmune Effects: A Case Report

Poster Presenter: Naveed Butt
Lead Author: Sheema Imran, M.D.
Co-Authors: Ali Raza, Asghar Hossain, M.D.

SUMMARY:

Objective: The objective of this article is to report immunologically induced side effects of lithium. Case Description: This is a case of 32-year-old female admitted to Bergen Regional Medical Center with disorganized behavior, elevated mood, irritability and auditory hallucinations after engaging in the excessive use of marijuana. She was discharged on Klonopin 0.5mg PO b.i.d, Prozac 20 mg PO daily, Neurontin 300mg PO t.i.d and Seroquel 50 mg PO at bed time. She was started on lithium in the outpatient clinic to address her mania. She later developed asymmetrical joint pains and fever for which she was referred to rheumatologist. Blood workup confirmed the presence of antinuclear

antibodies (ANA). It was decided to discontinue the lithium after searching through research articles to establish the association of lithium with autoimmune diseases like autoimmune thyroiditis and psoriasis. Patient got better afterwards and her joint pains resolved. Discussion: Lithium remains an imperative drug in the long-term therapy of bipolar affective disorders. It is also a proven prophylactic agent against relapses or recurrences of abnormal mood episodes in unipolar depression, hypomania and mania. It has also been shown to reduce suicidal risk and short term mortality. Despite its proven efficaciousness, its use is associated with numerous clinical limitations. These include: a narrow therapeutic window hence necessitating regular monitoring of therapeutic concentrations, cardiac toxicity, renal tubular dysfunction and endocrinopathies like thyroid abnormalities, hyperparathyroidism, transient hyperglycemia and nephrogenic diabetes insipidus. This review will focus mainly on the effects of lithium on the immune process. Probable autoimmune mechanisms include that lithium enhances the activity of B lymphocytes leading to increased IgG and IgM production, reduction of the ratio of circulating suppressor to cytotoxic T cells (Wilson et al. 1989; Kibirige et al. 2013) and its effect of inducing proin?ammatory cytokine production. The latter assumption is substantiated by studies which describe the role of IL-1ß (Paolieri et al. 1999), IL-6 (Simons et al. 1998) and TNF-a (Tarhan et al. 2013) in autoimmune thyroiditis. The activation of pro-in?ammatory cytokines by lithium may contribute to the intended therapeutic effect of dampening mood in manic patients, but may also cause some of the side effects of lithium, seen in patients suffering from certain autoimmune diseases such as autoimmune thyroiditis and psoriasis. Conclusion: In conclusion, we found that lithium activates the production of cytokines that promote in?ammatory processes such as IL-1ß, IL-2, IL-6, IL-17 and TNF-a which might contribute to the therapeutic effects, but also the autoimmune side effects of lithium.

No. 183

Cocaine-Induced Chorea: A Case Report

Poster Presenter: Naveed Butt
Lead Author: Tarek Aly, M.D.
Co-Authors: Juan S. Pimentel, M.D., Asghar Hossain, M.D.

SUMMARY:
Chorea is derived from the Greek word meaning" choral dance". It is characterized as brief, asymmetrical, irregular, non-repetitive and non-rhythmic spontaneous movements which may vary from restlessness, mild fidgeting and dance like gait to continuous flow of disabling violent movements. Among the other causes of chorea which include hereditary, metabolic and infections, cocaine and amphetamines are one of those. In this abstract, we would like to focus on complex relation between chorea and cocaine abuse. We are presenting a case of 30 y/o female with history of cocaine use who presented at Bergen Regional Medical Center with movement disorder: chorea. Patient and collateral reported patient developed it after ingesting unspecified amount of crack cocaine. Cocaine was confirmed in urine and the quantitative value was >5400.0 ng/ml. Cocaine use remains a significant problem worldwide, with an estimated 18.2 million users between age 15 to 64 years. Its use is more prevalent in North America with 5.1 million users. It blocks the dopamine transporter(DAT) and prevents the reuptake of dopamine and other catecholamines at presynaptic terminal. By this way, it increases the concentration of dopamine at extracellular levels which exerts all its euphoric effects as well as motor effects. Although movement disorders may develop primarily due to neurologic disease but it may be a manifestation of certain medication abuse or withdrawal. Abuse of psychostimulants like cocaine may cause numerous movement disorders through their interaction with different neurotransmitter systems, including dopaminergic, noradrenergic, serotonergic, and GABAergic systems. Movement disorders can be either hyperkinetic or hypokinetic including parkinsonism, tremor, dyskinesia, and myoclonus. Most of these disorders are either directly or indirectly related to the basal ganglia of the brain. Hyperkinetic disorders include tics, dystonia, myoclonus and akathisia. One of the dramatic movement disorder caused by cocaine is the chorea and akathisia commonly known as “crack dancing” and buccolingual dyskinesia known as twisted mouth. This disorder is more prevalent among younger cocaine users but it is hard to assess the overall prevalence of chorea in cocaine users as

the disorder is mostly self-limited and under reported. We concluded that increase in choreo-athetoid movement in a patient with substance use disorder may be related to cocaine use.

No. 184

Spiritually Integrated Psychiatric Care in an Urban Setting

Poster Presenter: Mena Mirhom, M.D.

SUMMARY:

Background: One in four patients who seek mental health care will first seek treatment from their clergy member. While this figure has declined over the recent decades, clergy continue to be contacted at a more frequent rate than psychiatrists or general medical doctors for initial mental health care. (1) With this in mind, we began a study in our hospital to determine how residents and patients perceive the role of spirituality in psychiatry. We seek to identify benefits and barriers of integrating spirituality into psychiatric care. Based on the results, an educational curriculum will be implemented in order to train residents on the importance of assessing spiritual needs of patients and how to address them properly in a clinical context. We will use other models that have been shown to be successful (2). This will also serve as a baseline for the spiritual demographics of the patient population in Bronx-Lebanon Hospital center for future projects. Methods and Procedures 1. BLHC residents, other mental health providers and patients who are willing to participate will be anonymously surveyed using either a paper or a virtual survey. 2. The survey's questions are both "multiple-choice" and "yes-no" questions, and many of them offer space for residents, other mental health providers and patients to write comments when desired. 3. Residents and other mental health providers will not be asked to write their names or any other piece of personal identifying information on the survey form.

No. 185

First Manic Episode Following the Use of Disulfiram

Poster Presenter: Aarya Krishnan Rajalakshmi, M.D.
Co-Authors: Mamta Sood, M.D., Shyam Roy

SUMMARY:

Introduction: Disulfiram use has been associated with the emergence of psychotic symptoms.Here we report the case of a patient wherein the emergence of manic symptoms had a temporal association with Disulfiram initiation. Case history: Mr.V,a 32 year old married male, was hospitalized in the psychiatric unit of our tertiary care hospital after he was brought by family with complaints of aggression towards them. On evaluation it came through that he had a history infrequent use of Cannabis and Alcohol. Perturbed by his substance use the patient was encouraged by his family members to take once daily tablets of Disulfiram 250mg assuming that it would assist in the patient abstaining completely from all psychoactive substances and the patient and the patient adhered to this regime. Per history, the patient used Cannabis on two occasions in the first 2 days of starting Disulfiram.,after which he discontinued further cannabis use but persisted with Disulfiram use.It was seen that after about 3 weeks of commencing Disulfiram there were notable changes in the patient's behavior in the form of increased cheerfulness alternating with irritability, boastfulness, authoritativeness, increased and loud speech, elaborate planning, grandiose claims, increased need for sex, agitation and argumentativeness escalating to aggression.The patient had no past or family history of psychiatric illness.His family members stopped administering Disulfiram a few weeks after symptom onset and sought treatment.On Mental status examination at the time of admission, the patient was irritable combative, loud, grandiose and expressed ideas of persecution.The diagnosis of Manic episode with psychotic symptoms was entertained.His urine drug screen was negative at admission. Risperidone was initiated and increased to 4mg. There was steady improvement and after 2 weeks his symptoms had substantially resolved. Discussion: Disulfiram has been used in the management of alcohol dependence for several decades now. Its inhibition of Dopamine beta- hydroxylase leading to an increase in Dopamine levels in the mesolimbic system, has been postulated as the possible mechanism underlying psychiatric manifestations seen with Disulfiram.In our patient Disulfiram use for 3 weeks preceding symptom onset The temporal sequence of events, the theoretical potential of Disulfiram to precipitate symptoms of psychosis and

the mention of such events in literature led us to implicate this agent as one which possibly triggered a manic episode in our patient. The likely role of Disulfiram in our patient's illness ,adds to the meager but existing literature on Disulfiram's potential to trigger not only Psychotic, but also classic Manic symptoms.The other aspect to be noted from our elucidation is that here Disulfiram was used in standard doses as opposed to earlier theories that blamed high doses of Disulfiram for psychiatric symptomatology.

No. 186

"Phantom Visions": Charles Bonnet Plus Syndrome or Late-Onset Paraphrenia?

Poster Presenter: Aarya Krishnan Rajalakshmi, M.D.
Co-Authors: Sen Sen Liu, Sunil Verma, M.D.

SUMMARY:

Introduction: Charles Bonnet syndrome (CBS) refers to the presentation of elderly individuals with complex, persistent visual hallucinations (VH) in individuals who possess insight into these symptoms, lack psychiatric illness/cognitive impairment and invariably have accompanying ocular pathology. Through the years there has been a lack of consensus about the characterization of CBS .Here we present the case of an elderly patient with distressing, recurrent, vivid visual hallucinations with wherein a CBS plus seems to be an apt characterization. The case: The patient is an 81y/o female who was admitted to the medical floors for persistent visual hallucinations .Since the onset 3 months ago the patient had been seeing vivid ,recurring images of animals, children and people having sexual contact that were not visible to other people. She regarded these experiences as real and upsetting. She started refusing to leave home citing fears of being robbed by these 'people' .On account of these symptoms, her Primary care doctor had started her on Risperidone and was increased to 1mg without benefit.The patient had no prior h/o psychiatric symptoms or remarkable memory changes. In the hospital she was alert, oriented with an MMSE score of 27/30.A dementia lab work was normal. Brain imaging showed right medal occipital encephalomalacia while her prior CT a month ago had showed sub acute right tempero-occipital infarction in the PCA territory. Ophthalmology was consulted and she was found to have a 20/60 vision in her right eye and a vision limited to hand movements in her left eye with a 4+ cortical cataract in this eye. She was advised to schedule an Ophthalmology follow up after discharge for cataract removal.When Psychiatry was consulted, it was opined that her symptoms were a presentation of CBS plus. The patient was educated about the nature of these symptoms and the likely contribution of her visual limitation .The need for cataract removal was stressed. Considering the lack of improvement with Risperidone and due to new onset resting tremors after increase in dose of Risperidone, it was discontinued .The patient was eventually discharged with the instructions to follow up with Ophthalmology. Discussion: " True CBS" is regarded as a syndrome with complex VH, presence of insight, absent psychiatric symptoms or cognitive difficulties and the presence of ocular pathology.Howard in 1994 remarked on the rarity of "true CBS" presentations and made a case for "CBS plus" to refer to elderly individuals who present with CBS type VH but do not otherwise fit the bill for "True CBs".Our patient's symptoms aligned closest with a CBS plus as opposed to a more nonspecific category of paraphrenia or Unspecified Psychosis.Of further interest in our patient were the coexistence of peripheral ocular pathology and the presence of right tempera-occipital encephalomalacia drawing support to the de afferentiation theory of CBS type VH.

No. 187

Treatment-Resistant Catatonia in Underlying NMDA-Receptor Encephalitis

Poster Presenter: Faiz Hasan
Co-Author: Christopher Burke

SUMMARY:

Ms. T., an 18-year old Asian-American female with a past psychiatric history of depression presented to the psychiatric consult service with medication resistant catatonia during first break psychosis. Her initial presenting symptoms included paranoia, social withdrawal, restlessness, and behavior inconsistent with her norm as per family. The medical and neurological workup for metabolic abnormalities, encephalopathy, and endocrine disorders were inconclusive. She then presented to psychiatry with

a suspected diagnosis of first episode psychosis and was tried on Haloperidol, later switched to Olanzepine; this resulted in the patient exhibiting signs of catatonia—she was mute, eyes volitionally shut, bed-bound with absence of oral intake. After failed trials of Lorazepam, titrated up to 16mg/day with poor response, she was transferred to our consult psychiatric services from the tertiary center for electro-convulsive therapy (ECT) to treat the catatonia unresponsive to medication management. Repeated medical and neurologic workup proved inconclusive once again, leading to the initiation of ECT. After 11-treatments with poor response and further deterioration, including respiratory depression and AV-disassociation, the clinical diagnosis of NMDA-receptor encephalitis was introduced and appropriate serum/CSF biomarkers were drawn and pending results but treatment was started immediately. After the 2nd high-dose of Methylprednisolone, the patient awoke from her state of "catatonia" and improved dramatically. Weeks later, test results confirmed the diagnosis. In this poster, we discuss the challenges and importance of balancing medicine and psychiatry, especially in young adults presenting with first-break psychosis.

No. 188

Psychosis Secondary to Baclofen Withdrawal: A Case Presentation

Poster Presenter: Faiz Hasan

SUMMARY:

Mr. J., a 48-year-old Hispanic male with a past psychiatric history of chronic alcohol use disorder, presents to the emergency room with fever, altered mental status, spasticity, and visual hallucinations. The patient's last alcoholic drink was 16 hours ago and thought to be in withdrawal, as the patient has multiple prior admissions for this reason. With limited history, he was admitted to the inpatient services and started on intravenous fluids, tapering Lorazepam, and Thiamine. The consult psychiatry team considered the differential diagnoses of alcohol withdrawal, serotonin syndrome, and benzodiazepine withdrawal. Initially, the patient's condition improved clinically but he continued to have visual hallucinations throughout his stay. This led to the concern of suboptimal management of alcohol withdrawal but as per CIWA protocol, the patient was detoxified appropriately. A thorough investigation through collateral information obtained from the patient's sister revealed that he's had a minor motor vehicle accident several months ago and since, the patient has been taking some medication to help "relax his muscles". The patient has a history of noncompliance with medication instructions and reports taking higher doses due to pain.This history gathering helped identify that the source of his presenting symptoms were due to acute Baclofen withdrawal. The patient was restarted on the medication and tapered off with full resolution. Baclofen withdrawal commonly mimic psychiatric disease and in this poster, we discuss the significance of pharmacotherapy and its role in differentiating and treatmenting withdrawal symptoms.

No. 189

The "Reading the Mind in the Eyes" Test: Investigation of Psychometric Properties and Test-Retest Reliability of the Persian Version

Poster Presenter: Ladan Khazai, M.D.

SUMMARY:

The "Theory of Mind" is the capability of attribute mental states to the self and to others in order to predict behavior. Several studies have found that conditions such as autism, Schizophrenia and anorexia nervosa, involve a difficulty in recognizing another's state of mind. The "Reading the Mind in the Eyes test" is a simple measure which has been widely used. The revised version has 36 pictures of the eye region and the participants have to one of the four words that best describes the mental state of the person in picture. The main aim of the present study is to study the Eye's test validity and reliability in Persian population. The test was designed as an online test and was distributed online via email and social networks. Data collection lasted for three months and in order to evaluate test-retest reliability, a subgroup of participants was invited to answer the test one year later. A total of 545 volunteers s took part; N=282 women (51.7%) and N=263 men, with a mean age of 25.8 (SD 6.21) Range 16 to 69. Distribution of responses: the mean score of all participants was 22.76 (SD=3.41, min=9,Max=31). Validity: as different authors have

previously mentioned, validity is difficult to investigate since there is no gold standard to be used. Test-retest reliability: We found no significant difference between the scores of participants who performed the test twice (P=0.709).Gender differences: females on average performed better than males. Females' mean score was 23.13 (SD=3.16), which in comparison with males' mean score 22.43 (SD=3.36) was significantly higher (P=0.016). Academic degree and field of study: no significant differences were detected either among different field of studies (P=0.235) or among different academic degrees (P=0.076). SPSS version 11.5 was used to analyze the data. Considering the Empathizing-Systemizing (E-S) theory, our study has led to some notable findings. First of all, among those studied Humanities and Engineering, there were significant sex differences, with females scoring higher in the first and males in the second. This is consistent with E-S theory that predicts those with the S type brain, which is more common among men, tend to analyze and construct rule-based systems" rather than to identify another's mental states and to respond to these with an appropriate emotion. However, opposite to what theory predicts, we found no significant differences among various fields of study in performance on the Eyes test. The Eyes test is an easy-to-use, easy-to-score measure of facial affect recognition. This study indicated that psychometric properties of the Persian Eyes test, the revised version for adults, are generally acceptable except for Item 9 and 29 which its translations have to be reconsidered both in target and foils , regarding their failure according to several criteria.

No. 190

Integration of Mental Health and Primary Care: A Person-Centered Approach

Poster Presenter: Ladan Khazai, M.D.

SUMMARY:

There is a high prevalence of mental disorders among people presenting to primary care settings. Like-wise, people with mental disorders have high rates of physical disorders. Addressing behavioral health problems in primary care is essential because of the prevalence of these problems in primary care setting with reported prevalence of smoking at 20%, obesity at 30% and sedentary lifestyle at 50%. Chronic conditions that require a behavioral health component in a standard care protocol include asthma, diabetes, cardiovascular disease, irritable bowel syndrome obesity and substance abuse. Primary care practices are de facto where the overwhelming majority of patients with mental health problems receive care. There is mounting evidence demonstrating that integrated care improves access to both mental health and physical health services, decrease stigma of receiving mental health care, improves outcome and reduces health care costs. Integration may need to be addressed at multiple levels' at the systems' level, providers' level, interventions' level, patient's level. At the system's level, major factors such as financing of care and facilitating access to care need to be addressed. At the providers' level, training and commitment are essential. Medical care providers need to have enhanced training in mental health and substance abuse recognition and need for intervention. Likewise, mental health and substance abuse providers need to have enhanced training in the recognition and need for intervention for medical problems. At the interventions' level, there is a need to identify, select, and develop integrated pharmacological or psychosocial interventions that are most appropriate for the patient. At the patients' level, there is a need to increase awareness and participatory, protagonist role in the process of care. The emerging PID model considers the person-in-context as the center and goal. It views the process of care as a partnership approach, including the patient, family, care givers and the stakeholders forming a health support network. The first level includes the assessment of health, such as physical or mental disorders along with assessment of functional abilities. The second level is the assessment of contributors to the health status. The third level is the experience of health which includes the experience of wellbeing and experience of ill health. These subjective contributions to the process provide idiographic narrative crucial for empowerment, engagement, partnership and recovery. Refocusing medicine from an essentially disease-centered,"reactive" attitude to an approach focusing on disease prevention and health restoration with emphasis on enhancing wellbeing and health living calls for integration of care. The PID

model provides an overarching conceptual framework for integrated care .

No. 191
Gender Comparison on Quality-of-Life and Comorbid Alcohol Dependence and Major Depression
Poster Presenter: Ladan Khazai, M.D.

SUMMARY:
Compared to men, substance-addicted women have greater social vulnerabilities that may impact their symptom presentation and overall quality-of-life (QOL). The latter is gaining prominence as an outcome measure and key element of person-centered care. We aimed to compare in this study treatment-seeking men and women with co-morbid alcohol dependence and major depression on measures of depression severity, addiction severity, and quality-of-life and to examine associations between addiction/depression severity and quality-of-life separately in men and women. Men (n=34) and women (n=33) participating in a psychopharmacology trial for co-morbid alcohol dependence and major depression were administered the Addiction Severity Index (ASI), the 25-item Hamilton Rating Scale for Depression (HAM-D), and the Multicultural Quality of Life Index at baseline as part of a large assessment battery. Women reported greater QOL impairment than men despite being similar on measures of depression and addiction severity. Depression severity, but not addiction severity, was significantly associated with QOL impairment in both men and women. Treatment-seeking women with co-morbid major depression and alcoholism report lower QOL (I.e., happiness and life satisfaction) than their male counterparts. Depressive symptoms, but not addiction-related problems, may contribute to global QOL impairment. Alternatively, QOL impairment may increase depressed mood. Overall, QOL assessments may identify areas of impairment and opportunities for health promotion not assessed through traditional measures used in addiction treatment programs, and these measures may be more sensitive to the specific needs of women. Consideration of all these factors is likely to enhance person-centered care.

No. 192
Dexmethylphenidate XR-Associated Orofacial Dyskinesia in an Adolescent
Poster Presenter: Mandar Jadhav, M.D.
Co-Authors: James Waxmonsky, Raman Baweja

SUMMARY:
Introduction: Orofacial dyskinesias are involuntary repetitive movements of the mouth and face, which are commonly seen in patients who are on long-term treatment with antipsychotic drugs. This condition has been also reported with use of antidepressants, mood stabilizers, anticonvulsants, antiemetics and other medications (1). Described herein is an unusual case of dyskinesia associated with use of dexmethylphenidate XR developing in an adolescent female despite her having previously tolerated the medication well for over five years. Case History: Our patient is a 14-year-old female with diagnoses of autism spectrum disorder, ADHD and panic disorder without agoraphobia. She was on a combination of medications which included dexmethylphenidate XR 20 mg, escitalopram 20 mg, and clonidine 0.1 mg. She presented to clinic with emergence of orofacial dyskinesia (lip smacking, puckering and facial grimacing) during a routine follow-up visit. The movement was reported to start after she would take her morning dose of dexmethylphenidate XR 20 mg, and last until late afternoon. As per family report, a similar reaction to dexmethylphenidate XR had occurred in her sister and her mother had also had a history of dystonic reaction to metoclopramide. Once the dexmethylphenidate XR 20 mg was discontinued, our patient's orofacial dyskinesia resolved completely. She has subsequently been doing well while taking methylphenidate IR with no recurrence of dyskinesia being reported at two and three-month follow-up visits. Discussion: There are limited reports in the literature about methylphenidate induced orofacial dyskinesia (2). To the best of our knowledge, this is the first case of dexmethylphenidate-ER induced orofacial dyskinesia. In a large, multi-center, double blind, placebo-controlled, parallel-group trial of dexmethylphenidate XR, only one case of musculoskeletal stiffness was reported. In that case, the symptom resolved upon discontinuation of the medication (3). In developing our patient's plan of

care, and in reviewing the literature, we carefully considered several other possible etiologies for the reported symptom, but given the rapid resolution of symptoms after discontinuation of dexmethylphenidate XR, and finding no compelling evidence for the other etiologies, we concluded that the abnormal movement was associated with the medication. While the possibility of motor tic disorder cannot be ruled out completely, the onset of the movement being right after the morning dose of dexmethylphenidate XR being taken, the fact that the dyskinesia lasted until late afternoon, and that the symptom completely resolved after discontinuing the medication, make the likelihood of tic disorder as an alternate etiology very low. This case highlights the importance of continuous monitoring for the emergence of abnormal movement disorders when using dexmethylphenidate XR, even if the patient has been tolerating the medication well.

No. 193

Pharmacological Treatment of Cannabis Related Sleep Disturbance: A Systematic Review of the Literature

Poster Presenter: Naista Zhand, M.D.
Co-Author: Robert Paul Milin, M.D.

SUMMARY:

Background: Cannabis use and cessation both impact normal sleep architecture. While the relationship between active cannabis use and sleep is more complex, sleep disturbance is one of the hallmarks of cannabis withdrawal. Studies have indicated that treatment of this key symptom may facilitate abstinence. Method: We conducted a systematic literature search across five electronic databases including PubMed, Psycinfo, MEDLINE, Cochrane review and Embase. Human studies using a pharmacological treatment for sleep disturbances associated with cannabis use or withdrawal were included. Review articles, case-series, open trials, posters and editorials were excluded. Results: Seventeen publications, involving 562 participants, were included in this review. Major limitations involved small sample size, high dropout rate, methodological limitations and heterogeneity of participants. Most of the studies were at high risk of bias, further downgrading the level of evidence. A meta-analysis was not performed due to lack of quantitative data, marked heterogeneity and low quality of the included studies. Conclusion: There is not sufficient evidence for any of the reviewed treatment options. Methodological limitations in a majority of the studies rendered their findings preliminary. Of the twelve investigated pharmacological agents, Quetiapine, Mirtazapine, Gabapentin, Lofexidine and Zolpidem showed some primary benefits for treatment of sleep difficulties associated with cannabis withdrawal; however future prospective studies are required to confirm such results. Scientific significance: This review examines the current evidence for potential pharmacological options for treatment of cannabis withdrawal and associated sleep disturbance. It furthers our knowledge and provides groundwork for future research on two potential agents Quetiapine and Gabapentin.

No. 194

Seeing Beyond Enucleation: Use of Clozapine After Suicide Attempt in a Schizoaffective Male

Poster Presenter: Nora Jane Carson, M.D.

SUMMARY:

Background: Clozapine has been shown to reduce suicide risk in schizophrenic and schizoaffective individuals. This robust effect is independent of increased provider contact and is not circumscribed to treatment-resistant schizophrenia. Yet, clozapine prescription rates in the United States remain below those of comparable countries, and below rates of treatment-resistant schizophrenia. We aim to highlight the utility of clozapine in managing suicidal behavior, as well as the complexities in managing autoenucleation. **Methods:** This case study explores the management of an acutely suicidal schizoaffective male patient with prior self-inflicted enucleation. **Results:** Patient AR is a 61-year-old male diagnosed with schizoaffective disorder, bipolar type. In the years prior to presentation, he enucleated his left eye, and while psychiatrically hospitalized, made an attempt to enucleate the right, with resulting complete vision loss. He presented to our care several months after blinding himself, acutely suicidal, having used a butter knife to pierce through his left orbit. Clozapine was initiated in light of his high suicide risk, and given

prior treatment failure of two antipsychotics. Valproic acid was started for its dual efficacy as a mood stabilizer and antiepileptic, deemed medically necessary given AR's intracranial trauma. During hospitalization, his suicidal thoughts and self-harm gestures abated, and affect brightened concurrently. **Discussion:** This case is consistent with existing research demonstrating efficacy of clozapine in treating suicidal behavior. Though in this case clozapine was used after treatment failure with two antipsychotics, the literature supports earlier use of clozapine in those at high risk for suicide. We consider that such use of clozapine in AR's case may have led to a better outcome. Further, this case adds to the scant literature regarding enucleation as a self-harm behavior associated with psychotic spectrum illnesses. As in this case, Fan, 2007, found that bilateral autoenucleation is common, even under hospital supervision. Conclusion: Clinicians should recognize the inappropriately low clozapine prescriptions rates in the U.S., the indications for clozapine use, and the unique benefits of clozapine in mitigating suicide risk.

No. 195

Hand to God: Cannabis Psychosis and Withdrawal

Poster Presenter: Nora Jane Carson, M.D.

SUMMARY:

Background: Changes in the political climate are paving the way for the legal expansion of medical and recreational cannabis use in the United States, increasing the need for clinicians to understand the potential risks of this drug. While cannabis has been shown to induce transient dose-dependent psychotic symptoms, there is also evidence of an association between cannabis use and development of schizophrenia, though a causal link has not been established. In a large prospective study, persons with an initial diagnosis of cannabis-induced psychosis had a 46% chance of later diagnosis of schizophrenia spectrum disorder at 8-year follow-up, and cannabis-induced psychosis conferred the highest risk of conversion to schizophrenia among common drugs of abuse studied. Additionally, studies support the existence of cannabis withdrawal syndrome, newly recognized as a diagnosis in the *Diagnostic and Statistical Manual of Mental Disorders* Fifth Edition, with both somatic and psychiatric manifestations that rarely come to medical attention. **Methods:** The following is a case report of a 20-year-old female college student with a 6-year history of daily marijuana use, without other significant substance use or psychiatric history, treated at a large university medical center. Four days prior to presentation, she abruptly discontinued marijuana use. During this period of abstinence, she reported feelings of extreme anxiety, restlessness, sweating, paranoia, and developed a preoccupation with religion, having not previously been religious. Referencing a biblical passage, she amputated her right hand with a kitchen knife. The patient was admitted to a large university medical center, and was closely followed by the Psychiatric Consultation service. Re-attachment of the hand was attempted but failed. She was treated with aripiprazole 10mg daily, clonazepam 0.5mg twice daily, and trazodone 50mg nightly. Assessments were lacking persistence of mood or psychotic symptoms. She did not attempt any further self-harm behaviors and maintained good insight and reality testing. **Conclusion:** To our knowledge, the psychiatric literature on this subject, severe self-mutilation associated with non-synthetic cannabis use, consists only of case reports. While adding to the scant literature on this matter, this case also highlights the importance of further research aimed at understanding the expected outcomes and appropriate treatment course after such an episode. The current study presents a case of brief psychosis and extreme self-harm behavior in the context of heavy marijuana use and abrupt discontinuation. The patient exhibited symptoms consistent with sequelae of cannabis use and cessation commonly documented in psychiatric literature, psychosis and withdrawal, respectively, while also suffering severe self-inflicted mutilation that is rarely associated with cannabis use.

No. 196

Multiple Sclerosis With Catatonic Presentation in Patient With Major Depression

Poster Presenter: Rama Yasaei
Co-Author: Abdolreza Saadabadi, M.D.

SUMMARY:

We are presenting a rare presentation of Multiple sclerosis patient that presented with catatonia which

emphasize the association of these two condition. Case presentation: This is a 51-year-old right handed female who was admitted to the mental health hospital with diagnosis of Depression with psychotic features and catatonic state. On admit, patient was refusing to walk secondary to lower extremity weakness. She was also not bathing or eating. She endorsed some suicidal ideations and auditory hallucinations as well. She ambulates with her walker. Her lower extremity weakness started on the way to the hospital and has slowly been getting worse. she complained of a full body pain, but didn't provide any details. She stated "doesn't know how to walk". She endorses auditory hallucinations and says there are "many voices" that tell her to hurt herself. After Neurology consult, CT Head performed, which was unremarkable with no masses, midline shift or other acute intracranial processes. Neurological exam reveals no motor or sensory deficits in bilateral lower extremities. She does have hyperreflexia in her legs and so MRI cervical spine and brain and CSF study performed. Per MRI brain report, Multiple right frontal juxtacortical nonenhancing white matter lesions, left pericallosal and posterior callosal white matter nonenhancing lesions, bilateral peritrigonal white matter nonenhancing lesions, right larger than left, large left central pontine white matter lesion, and two large right middle cerebellar peduncle nonenhancing lesions are identified, compatible with demyelinating process such as multiple sclerosis. Per MRI neck report, Patchy abnormal signal on the STIR and T2 weighted images in the cervical cord. The findings were relatively nonspecific but primarily include demyelinating process such as multiple sclerosis or acute disseminated encephalomyelitis. Inflammatory process is not excluded. Infection is rare but also not completely excluded. CSF serological test showed positive CSF olgoclonal Bands, high IgG, albumin index, and IgG index. Patient was diagnosed with Multiple Sclerosis comorbid with Major depressive disorder with psychotic feature. Patient was treated for depression and was referred for further evaluation and treatment to outpatient neurologist. Conclusions: Neurological disorders should be always in differential diagnosis of patients with new-onset catatonia, and before making the diagnosis of Catatonia, we should rule out these disorders like MS by neuroimaging and other types of investigation studies. Therefore, we can have a better understanding of the disorder, manage the patient's symptoms, pursue the treatment of patient, and reduce the risk of misdiagnosis.

No. 197

Sudden Sensorineural Hearing Loss Associated With Polysubstance Overdose

Poster Presenter: Rama Yasaei
Co-Author: Kofi Owusu-Antwi

SUMMARY:
Methadone, a long-acting synthetic opioid agonist, has cross-tolerance with other opioids including morphine and heroin, and offers very similar effects but for a longer duration of time, thus is mainly used for opioid addiction. We present a case of a 21 year old female who developed bilateral sudden sensorineural hearing loss (SSNHL) after use of methadone after a long period of abstinence from opioids. We propose opioid receptor normalization-up regulation-sensitization in period of abstinence as the predisposing factor for methadone-induced bilateral sensorineural loss. The exact pathogenesis of hearing loss after drug intake remains unclear, although some theories have been offered. One of the theories explains that the cochlea is one of the highly active structure of human body with rich blood supply (mainly from basilar artery) to provide nutrients oxygen and drugs to this part of the body. Vasospasm of the arteries can cause ischemic stroke of inner ear and in some cases leading to SSNHL. Studies have shown the distribution of 4 types of opioid receptors in cochlea and vestibular system of pigs and rats models. The sensory neuronal loss due to overdose of opioids is rare and there are only few cases reported. Review of six published cases showed complete resolution in 4 out of 6 cases and 2 out of 6 resulted in severe permanent sensorineural loss. In one of the cases that reported on 2011, patient's hearing lost didn't improve after 5months despite the treatment with multiple doses of corticosteroid. There is a case report about the 24-year-old male with brief SSNHL after inhaling crushed Oxymorphone Extended release tablet. Also there is a case report about 2 cases in 2010 with acute bilateral Methadone-induced hearing loss which both resolved in less than 24hours, in urine

toxicology of both patients only Methadone and THC were positive. The fact that most of these cases are affected by Multiple drugs, make the diagnosis more chalenging, but the only common factor between all the reported cases is Methadone. One factor in this case is that Ms.S was incarcerated and was therefore not using illicit drugs or Methadone until her release when she began her usual dose of Methadone (90mg).

No. 198

CAPACITY: A Helpful Mnemonic for Capacity Evaluations

Poster Presenter: William Levitt, M.D.

SUMMARY:

Capacity evaluations are frequented requested on medical floors for a variety of reasons. The elements of capacity and not always understood, as some understand capacity to be an all encompassing principle as opposed to varying by time frame or task. The dictionary defines capacity simply as the ability to do, experience or understand something. While the definition is simple, the assessment may be complicated. Residents and students frequently use mnemonics to memorize information and I propose using this mnemonic when doing a CAPACITY evaluation C Communicate--> Can they Communicate? Do they have free Choice? A Appreciate--> Do the Appreciate the problem/medical condition? P Psych--> Is their decision affected by psychosis or depression? A Alternatives--> What are the alternatives to treatment? C Consequences--> What are the consequences of accepting or refusing treatment? I I can refuse!--> Do they understand they have the right to refuse treatment? T Treatment--> What is the proposed treatment? Y Reliability--> Is this opinion consistently expressed and reliable?

No. 199

Divided Doses of Suboxone: A Physiological Versus Psychological Need?

Poster Presenter: William Levitt, M.D.

SUMMARY:

Suboxone in a combination medication consisting of buprenorphine and naloxone (Bup/Nx) which is FDA approved for the treatment of opiate dependence. Buprenorphine has agonist effects at mu and delta opioid receptors and antagonist effects at kappa opioid receptors. The naloxone is a mu antagonist that functions to produce opiate withdrawal in the case of diversion. It is available in sublingual film (Suboxone) and tablets (Zubsolv) in addition to buccal (Bunavail) film preparations. Bup/Nx has been shown to effective in the office based treatment of opiate dependence. Bup/Nx has a half life between 24-42 hours and is indicated for once a day dosing. However, greater that 90% of patients in our clinic have reported feeling that the dose does not last all day if taken in the morning. However, the same dose is reported to be sufficient to control cravings and urges if divided in to two to three doses daily. As we have seen that most patients in buprenorphine clinic prefer to divide doses, we will attempt to look at the number of patients on long term maintenance who divide doses who create their own dosing schedule and look into psychological and physiological reasons for the need for divided dosing.

No. 200

Stiff Person Syndrome Presenting After the Initiation of Buspirone

Poster Presenter: Ibrahim Mohammad Mousa Sablaban, D.O.

SUMMARY:

Stiff Person Syndrome (SPS) is a rare, potentially debilitating, disease of uncertain etiology. The clinical features include muscular rigidity and spastic spells. However, clinical presentation is complex and patients often present with symptoms of panic attacks and autonomic instability. We describe a case of a 32-year-old patient with a history of depression and panic disorder who presented to the emergency room with signs and symptoms of shock and hyperthermia. Prior, the patient had a panic attack that coincided with the first-time administration of buspirone. The patient had a temperature of 105F, was found to be hypotensive and had oxygen desaturation. The patient was sedated, intubated and treated empirically with antibiotics as she was found to have a white blood cell count of 39,000. CT scan and lumbar puncture were normal. Over the next 30 days, various investigations for carcinoid, pheochromocytoma, porphyrias, and endocrine disorders did not yield a

diagnosis. Ultimately an exhaustive autoimmune and paraneoplastic workup was conducted yielding a markedly elevated GAD65 antibody titer of 1430 nmol/L. A diagnosis of Stiff Person Syndrome was made. The patient responded to treatment with regularly scheduled diazepam, was extubated prior to discharge, when the symptoms had subsided. While the etiology of SPS is unknown, a hypothesis based on the hindrance of gamma-aminobutyric acid (GABA) production via intrathecal autoantibodies to glutamic acid decarboxylase has been presented in the literature. A review of literature yields no prior appreciation of buspirone precipitating SPS. It is possible that the sympathomimetic nature of buspirone, explained by the established excitatory effect it has on the noradrenergic activity of the locus coeruleus, may have played a role in the precipitation of this episode. Although we can not definitively attribute causality, this case stresses the importance of further investigation and study of the potential relationship between buspirone and SPS.

No. 201

Designing an Innovative, Multidisciplinary Treatment Program for Patients With Non-Epileptic Seizures

Poster Presenter: Jacob Gadbaw
Co-Authors: Meagan Watson, Anson Kairys, M.A., Randi Heller Libbon, M.D., Alison M. Heru, M.D., Laura A. Strom, M.D.

SUMMARY:
Background: Historically, access to care for patients with non-epileptic seizures (NES) has been limited. While psychiatric treatment has proven necessary for the treatment of NES, there is no established best practice and few high-quality studies exist to guide treatment. Without appropriate care, these patients suffer a low quality of life, remain on antiepileptic medications, and place unnecessary burden on the healthcare system through overutilization of emergency departments and epilepsy monitoring units (EMU). Methods: In response to this deficit, we designed an innovative, technology centered treatment program that includes psychiatry, psychology, and neurology. To begin, all patients receive a formal, EEG-confirmed diagnosis in the EMU. After an initial assessment, there are several treatment pathways depending on the individual patient's clinical need. These personalized options include a 12-week psychodynamic therapy group, a 5-week psychoeducational group, individual therapy, family therapy, and medication management. The goal is to return patients to their primary care providers with the knowledge and skills necessary to manage their illness within six months of enrollment. Concurrently, we launched an IRB approved, technology assisted research study to evaluate the effectiveness of our clinic. We are using six measures, collected at three time points (at diagnosis, three months into treatment, and after six months of treatment). These measures include the Brief Illness Perception Questionnaire, Short Post-Traumatic Stress Disorder Rating Interview, Quality of Life in Epilepsy Inventory, Brief Cope, Dissociative Experiences Scale, and Family Assessment Device. Seizure frequency is also collected throughout treatment. We programmed these measures into Filemaker Pro which can be accessed through iPads supplied by the neurology department. If a patient's time point falls close to a scheduled appointment, Filemaker Pro automatically informs the front desk during check-in and the patient is given an iPad to complete the measures. If they are due at a different time, the program sends the patient a link via email to complete the measures on their home computer. Filemaker Pro then aggregates all data for analysis. Results: We currently have 87 patients enrolled in the research study. 71 patients have all completed their first set of measures. We have completed six of the psychodynamic groups and 15 of the psychoeducational groups, serving a total of 96 patients. We have active enrollment and data collection to provide feedback on protocols while evaluating the effectiveness of the model. Conclusion: This clinic integrates multidisciplinary teams to provide personally focused treatment for patients with NES. Through leveraging technology, this innovative model allows active evaluation of effectiveness of treatment with the goal to achieve disorder remission and transfer back to the primary care setting.

No. 202

Charles Bonnet Effectively Treated With Quetiapine: A Case Report and Literature Review

Poster Presenter: Jamison A. Bradshaw, D.O.

Co-Author: Walter Kilpatrick

SUMMARY:
Background: Charles Bonnet syndrome (CBS) is characterized by complex visual hallucinations in individuals with partial or severe blindness. First described by Charles Bonnet in 1760, the hallucinations themselves are typically purely visual and Lilliputian in character while sufferers tend to have a lack of prior psychiatric pathology and maintain some insight into the fictitious nature of their hallucinations. Despite this extensive history there is no current evidence-based treatment. This case describes a patient with CBS who experienced resolution of visual hallucinations and restoration of sleep wake cycle through treatment with quetiapine. Methods: A 72-year-old male presented to the emergency department after his family noticed increasing aggressive behavior, visual hallucinations, and loss of normal sleep-wake cycle. He described seeing classical lilliputian-like figures at home. His initial medical evaluation included a CBC, LFTs, and BMP which did show results consistent with ESRD but nephrology did not believe this to be significant to his presentation. A CT head did not show any acute abnormalities. We utilized PubMed and Medline for our literature review. Results: On mental status examination, the patient was found to be calm and cooperative without any apparent distress. His thought process was linear, coherent, and goal directed and there was no evidence of paranoia or delusional thought content. His attentional, concentration, and cognition were intact. He had no prior psychiatric history. He was reassured that this was not a psychotic episode and was started on quetiapine 50 mg qHS for treatment of visual hallucinations and restoration of his sleep-wake cycle. Discussion: A majority of case reports describing the treatment of CBS utilize olanzapine as the treatment agent from CBS. However, in two recent case reports reports, similarly to our patient, quetiapine was an effective treatment that eliminated his hallucinations and restored his sleep wake cycle. This case reinforces the efficacy of Seroquel monotherapy in the treatment CBS. Conclusion: Clinicians who are involved in the treatment of Charles Bonnet Syndrome should be aware that, based on recent case reports, quetiapine may be be emerging as an effective treatment option.

No. 203
Chronic Limb Pain: The Importance of Differentiating Complex Regional Pain Syndrome From Somatic Symptom Disorder
Poster Presenter: Jasmin G. Lagman, M.D.

SUMMARY:
Children and adolescents suffering from chronic pain have higher probability of endorsing elevated pain-related fear which is then associated with high levels of disability, depressive symptoms and school impairment. Presented here was a suspected patient with conversion disorder or functional neurologic symptom disorder who was initially diagnosed as a case of complex regional pain syndrome (CRPS). Case presentation: Patient was a 12yo female who was seen at an inpatient children rehabilitation facility for prolonged lower extremities pain with eventual loss of the ability to walk. Her mother was suffering from CRPS for many years. She was well and playing multiple sports days preceding the onset of pain. She succumbed to depression and had increased anxiety attacks. Patient expressed resignation on her ability to become better, noting her mother's years of struggle with pain. She endorsed fears on the thoughts of pain, and of being on more pain if her treatment fails. Her pain started 5-6 months and saw her pediatrician, two orthopedic surgeons, a rheumatologist, and later a palliative care specialist who diagnosed her with CRPS. She was prescribed with Gabapentin and was referred to an inpatient rehab for functional optimization. At one point, she saw a psychiatrist who started her on Cymbalta. Patient was described by her family as perfectionist and was an honor student. She felt that it was her responsibility to make her mother happy, and thus she needed to be perfect. She denied difficulties in school or other issues. Course in the wards: On admission, she had limited range of motion and decreased muscle strength in the lower extremities, negative imaging, and screening blood work. Her weakness and the location of the pain were not strongly correlated. The pattern of the weakness was not myotomal and allodynia was diffuse. This led to psychiatry consult for a possible conversion disorder. Due to patient's excessive thoughts

associated with the pain, persistent high levels of anxiety about her health and seriousness of her symptoms, and the inability to use her lower extremities due to pain, somatic symptom disorder was diagnosed. The multi-disciplinary treatment approach was changed. No pain medication was provided and therapy was focused on the child's ability to function. The pain was not discussed. The patient showed rapid improvement in symptoms and by the end of the third week, she was walking without any supports. Discussion: Both conversion disorder and somatic symptom disorder are separate disorders and belong to somatic symptom and related disorders in DSM 5. Since symptoms may appear as a medical condition, the diagnosis is complex. CRPS is a complex chronic pain experience and involves a multi-disciplinary treatment approach. Distinguishing between these types of disorder is important as seen in this case.

No. 204

Clozapine Withdrawal and Malignant Catatonia: A Case Report

Poster Presenter: Leonid Kapulsky, M.D.
Co-Author: Miranda Geniece Greiner, M.D., M.P.H.

SUMMARY:
Malignant catatonia is a severe, potentially life-threatening variant of catatonia marked by hyperthermia, autonomic instability and rigidity. The condition is often viewed as being on the same spectrum as neuroleptic malignant syndrome. Causes of malignant catatonia include antipsychotic medications, illicit drug use, and intoxications with other agents. It's also been reported that discontinuation of antipsychotic medications, specifically clozapine, can result in malignant catatonia. This is a report on a case of a 22-year-old Bangladeshi male with a history of schizophrenia who developed malignant catatonia in the setting of clozapine discontinuation. The patient presented to the hospital with mutism, rigidity, autonomic instability and an elevated creatinine kinase that was initially thought to be secondary to antipsychotic-induced neuroleptic malignant syndrome. However, given the fact that clozapine had been discontinued two days prior to presentation, the diagnosis was revised to malignant catatonia secondary to clozapine withdrawal, a phenomenon which has rarely been reported in the literature. The severe episode of malignant catatonia was resistant to high dose parenteral benzodiazepines and ECT but responsive to clozapine reintroduction. Potential mechanisms for this phenomenon are discussed. A thorough history of current and recently discontinued medications should be taken in all patients presenting with malignant catatonia because the treatment for patients with "discontinuation" catatonia may be different than for those with catatonia of a different etiology.

No. 205

Clozapine-Induced Myocarditis: A Treatment Algorithm

Poster Presenter: Martha J. Ignaszewski, M.D.
Co-Authors: Adam Chodkiewicz, Tamara Mihic

SUMMARY:
Myocarditis is a relatively rare adverse effect associated with the use of clozapine, however there is growing interest and awareness due to increasing reports of global cases of clozapine-induced myocarditis far exceeding the initial incidence rate reported in the product monograph (clozaril product monograph, Yousseff 2016). Management revolves around early recognition of the disorder, prompt discontinuation of clozapine, and multidisciplinary management. We present a case series of three patients who developed myocarditis in the course of hospitalization and clozapine treatment. We will review the pathophysiology for underlying clozapine induced-cardiotoxicity and present the multidisciplinary adverse-effect surveillance program that has been developed for use and prevention at our institution for patients initiated on clozapine. We will also highlight a newly developed biomarker based pathway where use of C-reactive protein (CRP) and cardiac troponin I allowed for early identification of myocarditis, and review the literature that supports this approach.

No. 206

The Psychiatric Fits: A Complex Presentation of Complex Partial Seizures

Poster Presenter: Martha J. Ignaszewski, M.D.
Co-Author: Shadi Zaghloul, M.D.

SUMMARY:

Objectives: Although seizures are common and symptoms are well described, diagnosis may be difficult in patients with neuropsychiatric or atypical manifestations. Psychiatrists are frequently consulted to assess patients whose symptoms have been labeled “behavioural” or “psychiatric”. We highlight factors to distinguish ictal psychiatric symptoms from primary psychiatric phenomena and review comorbidity with psychogenic non-epileptic seizures. We also explore the psychiatrist’s role as patient advocate when diagnostic opinions conflict to prevent premature closure. Methods: We collaborated with the Baystate Medical Center Department of Pediatrics, Neurology and EEG Laboratory. We utilized PubMed and Medline for our literature review. Results: Our patient is an 18-year-old Caucasian male with a history of treated epilepsy, who is medically admitted for workup of recurrent episodes described as “auras…with a state of disconnection…like a bad dream”. These were associated with extreme anxiety, somatic symptoms similar to PD, occurring 5-8 times daily, with high inter-episode distress about recurrence. He experienced “screaming in my head” with vivid dreams that he “struggled to differentiate from reality” and paranoia regarding the safety of locations that triggered attacks. Psychiatry was consulted for evaluation of “psychosis vs AD”. Psychiatric recommendations emphasized the importance of a thorough medical workup to exclude other etiologies that could mimic symptoms of generalized anxiety and panic attacks. EEG findings revealed an epileptogenic process in the right anterior temporal region, diagnosed as breakthrough seizures. He was started on oxcarbazepine with resolution of symptoms. Conclusions: The general hospital psychiatrist must be able to differentiate primary psychiatric disorders and possess a comprehensive knowledge of seizure disorders and the common accompanying neuropsychiatric syndromes to allow for accurate diagnosis. Atypical symptoms and high rates of psychiatric comorbidity may further complicate diagnosis. This underscores the importance of maintaining a broad differential and ensuring that patients are provided a comprehensive medical workup when clinical doubt is introduced, and to serve as patient advocates for additional workup to prevent premature diagnostic closure and misdiagnosis.

No. 207

Determinants of 30-Days Psychiatric Readmissions in an Academic Safety-Net Psychiatric Hospital

Poster Presenter: Pratikkumar Desai, M.D., M.P.H.
Co-Author: Jane Hamilton

SUMMARY:
Background Around 13% of psychiatric patients are readmitted soon after being discharged from acute inpatient psychiatric hospitals. 30-day readmission after acute psychiatric hospitalization is an indicator of quality and coordination of mental health care. Not only are 30-day readmissions considered adverse clinical outcomes for psychiatric patients, the costs associated 30-day readmissions place a higher economic burden on the health care system. This study examines demographic, clinical, treatment and community factors associated with 30-day readmission to a psychiatric hospital. Methods In this retrospective study, we examined 22,818 consecutive admissions of adult patients admitted to our academic safety-net psychiatric hospital from January 2010 to December 2013. This unit of analysis was a single patient admission, and readmission within 30 days of discharge was the outcome measure. We examined demographic factors including age, race, gender, marital status, employment status, and education level. Clinical factors included the primary psychiatry diagnosis, Global Assessment of Functioning (GAF) score, co-morbid medical conditions, mental health related symptoms. Treatment factors included the number of prior psychiatric hospitalizations and treatment adherence. Community factors included living situation prior to admission. In the adjusted analysis, a multivariate logistic regression model using generalized estimating equations was used to estimate the relative odds of each variable in predicting psychiatric hospital readmission within 30 days of discharge. Results In the adjusted analysis, we found that male gender (OR:1.21, 95% CI:1.08-1.36), no income (OR:1.13, 95% CI:1.02-1.25), being homeless (OR: 1.53, 95% CI:1.3-1.81), history of suicidal ideations (OR:1.27, 1.12-1.43), history of aggression (OR:1.24, 95% CI:1.08-1.41), and having ? 3 psychiatric hospitalizations (OR:4.73, 95% CI:4.21-

5.31) predicted 30-day readmission. Additionally, compared to having commercial insurance, patients who were uninsured (OR:1.77, 95% CI:1.49-2.09), enrolled in Medicare (OR:1.32, 95% CI:1.05-1.66) or enrolled in Medicaid (OR:1.41, 95% CI:1.03-1.93) were more likely to readmit within 30 days of discharge. Older age patients were less likely to be readmitted within 30 days (OR:0.98, 95% CI:0.98-0.99). Patients with depressive disorders (OR:0.74, 95% CI:0.64-0.86) and other psychiatric disorders (OR:0.46, 95% CI:0.29-0.72) were less likely to be readmitted within 30 days compared to bipolar disorder patients. Race, marital status, involuntary admission, treatment adherence, medical co-morbidity and admit GAF did not predict 30-day readmission. Conclusion Early readmission following psychiatric hospital discharge may be highly unsettling to patients and their families. Our findings suggest that interventions to reduce readmissions should target social determinants of frequent admissions to psychiatric hospitals such as employment and living situation.

No. 208

Capturing Medical Necessity: Building an Educational Curriculum to Enhance Clinical Documentation in a Psychiatry Residency Program

Poster Presenter: Ninos Adams, M.D.

SUMMARY:

Background In 2016, the California Department of Health Care Services completed an onsite compliance review of clinical documentation at a 24-bed, Medi-Cal funded acute psychiatric inpatient unit in Bakersfield, California. The purpose of the review was to verify whether patient care provided by the UCLA-Kern Medical Psychiatry Residency Program met acute medical necessity criteria in accordance with state regulations. The review evaluated 66 patient charts encompassing 488 acute inpatient days and concluded that 55% or 270 acute inpatient days failed to meet medical necessity criteria for admission and continued stay services. Appropriate justification of medical necessity is the chief element for determining Medi-Cal reimbursement. Therefore, the alarming disallowance rate resulted in a significant monetary recoupment by the state. As a result, the psychiatry department developed a documentation education curriculum to empower physicians with the skills necessary to capture medical necessity more effectively. Methods The position of a clinical documentation specialist was created by the psychiatry department to study the reasons for disallowance and identify areas for improvement. The documentation specialist hypothesized that documentation could improve with the innovation of a training curriculum as documentation is a skill not generally taught in medical school. The curriculum emphasized the use of standardized progress note templates, frequent didactic lectures highlighting the use of behaviorally-specific language, educational handouts, and most importantly ongoing daily one-on-one training sessions where the documentation specialist reviewed progress notes with physicians and provided feedback. It was important to determine whether the efforts achieved any degree of success. Consequently, outcomes were measured using a treatment authorization request process where a county mental health entity audited charts to determine whether to approve or disallow days on the basis of appropriate justification of medical necessity. Results After 1 month of educational intervention the disallowance rate for acute days dropped to 10% and continued to appreciable decline to 3% after 6 months. Overall, from July 2016 to July 2017 the inpatient psychiatric unit provided services to Medi-Cal insured patients for a total of 6264 acute inpatient days resulting in a disallowance rate of 5%. Conclusion Although the innovation of an educational curriculum required a significant commitment of time and resources, these efforts enhanced the psychiatry department's ability to capture medical necessity. Currently, providers in the department have a deeper understanding about the importance of accurate documentation for patient care and reimbursement purposes. Anecdotally, interpersonal communication increased throughout the psychiatry department as well and surprisingly a majority of physicians continued to welcome feedback to improve their documentation.

No. 209

Approaches to the Treatment of Delirium in the Intensive Care Setting in a Community-Based Teaching Hospital

Poster Presenter: Ninos Adams, M.D.

SUMMARY:

Background Delirium is defined as a disturbance in attention (i.e., reduced ability to direct, focus, sustain, and shift attention) and awareness (reduced orientation to the environment). Delirium occurs in 70 to 87 percent of those (patients) in an intensive care unit. With over six million admissions to the intensive care setting each year, many would benefit from improved treatment approaches. Methods A retrospective review of all patient's admitted to the intensive care setting at Kern Medical from January 1, 2016 to December 31, 2017 will be carried out. Results At the completion of data gathering, the study will incorporate final data collection and statistical analysis to determine possible approach superiority with respect to differing presenting situations. Conclusions Studies demonstrate that the number of days of intensive care delirium are associated with increased morbidity and mortality. Preventing and decreasing duration of delirium in the intensive care setting via improved treatment approaches will not only benefit the patient by decreasing morbidity and mortality related to it, but will also greatly decrease the burden on the healthcare system as a whole.

No. 210

"Smart Drug": Tianeptine Abuse, Withdrawal, and Treatment Management

Poster Presenter: Nisha Rao
Co-Author: Elias A. Khawam, M.D.

SUMMARY:

Background: Tianeptine is an atypical antidepressant with unique pharmacological properties. Its therapeutic effect is attributed to an increase in serotonin and dopamine reuptake, and modulation of the glutamatergic system. Tianeptine can potentially be abused as it has psychostimulant effect and full agonist effect on opioid receptors. It is not marketed in the United States but is available in Asia, Latin America, and many Middle Eastern and European countries. This case report provides psychiatrists with information on tianeptine abuse, its opioid-mediated withdrawal symptoms, and treatment management. Methods: We present a case of a 26 year old male with crohn's disease admitted for escalating abdominal pain. He was treated for acute inflammation and stricture at ileocolic anastomosis. Psychiatry consult was requested for depression as patient was on tianeptine and sertraline prior to the admission. Patient admitted to buying tianeptine online, without a prescription, and titrating up to 4 grams per day to manage his depression, pain and to "get high". He developed tolerance and experienced withdrawal symptoms when he tried to reduce tianeptine dose. During admission, he began experiencing symptoms similar to opioid withdrawal including sweating, nausea, muscle aches, hot and cold flashes, in addition to severe anxiety and depressed mood. The psychiatry consult team recommended baclofen, clonidine, gabapentin, and promethazine for tianeptine withdrawal symptoms. Lorazepam was added on as needed basis for severe anxiety that was not being managed by gabapentin or hydroxyzine. He improved with medication management and his withdrawal symptoms abated over 4 days. Results: Medication management improved patient's withdrawal symptoms during this hospitalization. He was discharged on sertraline, gabapentin and tapering dose of baclofen. He was seen for a follow up in outpatient psychiatric clinic within 7 days of the discharge and he reported no withdrawal symptoms. Discussion: Tianeptine, in contrast to other antidepressants, has psychostimulant effect and overtime, leads to increase in drug tolerance. Higher dose of tianeptine acts at the mu-opioid receptors and the drug abstinence results in opioid mediated withdrawal symptoms, which can start quickly because of short half-life. High level of anxiety and depression observed in tianeptine withdrawal could be due to glutamate modulator action. Treating tianeptine withdrawal promptly should result in symptoms subsiding. Conclusion: Antidepressants with opioid agonist effect should concern those treating drug addictions. Although tianeptine is not marketed in the United States, it is widely available through online pharmacies. Being familiar with tianeptine's abuse potential and opioid-mediated withdrawal symptoms helps psychiatrists with treatment management and successful recovery.

No. 211

Psychiatric Assessment of Emirati Patients Pursuing Bariatric Surgery for Obesity

Poster Presenter: Ossama Tawakol Osman, M.D.

SUMMARY:
Background: Obesity is currently a rapidly growing global problem of epidemic proportions and is especially prevalent in economically developed countries such as the United Arab Emirates. Obese individuals are increasingly considering bariatric surgery as their preferred means of choice for the reduction of excess body fat. This study explored the psychological characteristics that may potentially complicate the surgical management of obesity. Methods: This was a cross-sectional study of Emirati patients attending a bariatric clinic at Tawam Hospital, Al Ain, United Arab Emirates, between December 2010 and February 2012. Participants were assessed using standard clinical psychiatric interviews. Also used were screening instruments such as the Hospital Anxiety and Depression Scale, Sheehan Disability Scale (SDS), Body Image Quality of Life Inventory (BIQLI), and Multidimensional Body-Self Relations Questionnaire–Appearance Scale (MBSRQ-AS). Results: A total of 105 patients, 70% of whom were female, participated in this study. Participants were found to have frequencies of anxiety and depressive symptoms at levels of 24% and 13%, respectively. Participants also reported perceived functional disabilities in the following: work/school (27%), social life (36%), family/home (35%), and religious duties (39%). A total of 13 participants (12%) had BIQLI scores showing slight-to-moderate effects on their quality of life. The mean MBSRQ-AS subscale on self-classified weight was higher than the reported norms. Anxiety and depressive symptoms positively correlated with functional impairment (SDS) and negatively correlated with quality of life (BIQLI) (P = .000). MBSRQ-AS subscales significantly correlated with depression, functional impairment, and quality of life (P = .035). Conclusions: Anxiety, depression, perceived functional disability, impairment in quality of life, and disturbance of self-image were found to be common among participants in the study pursuing bariatric surgery for obesity. Recognition, assessment, and treatment of these symptoms are expected to be conducive to positive outcomes of bariatric surgery.

No. 212
A Case of Convulsive Syncope Mistaken for Psychogenic Nonepileptic Seizures
Poster Presenter: Quincy X. Zhong, M.D.

SUMMARY:
Syncopal episodes can have a wide variety of triggers including strong emotional responses and odors. When the episodes are accompanied by convulsions and have normal EEG findings, it can lead to a misdiagnosis of psychogenic nonepileptic seizures. A 49-year-old woman with a history of sexual trauma and a 15-year history of convulsive episodes was referred for psychiatric evaluation of her spells. The spells began with feeling hot and nauseated, followed by a sensation going from her head through the rest of her body making her feel weak. This progressed to staring, salivation, mouth smacking, facial tics, vocalizations, and rhythmic jerking of her back, arms, and legs that would last a few minutes. She initially remained aware of her surroundings but would eventually lose consciousness. The episodes could last 30 minutes from time of prodrome to time of waking up. She experienced sleepiness and generalized weakness afterward. At their most frequent, the spells occurred several times per day, and were triggered by emotions, heat, and odor. Routine, prolonged (1 hour), and ambulatory (24 hour) EEGs were normal, and witnessed episodes did not appear consistent with epileptic seizures, thus, she was given the diagnosis of psychogenic non-epileptic spells. With psychotherapy and psychotropics, the number of emotionally triggered episodes declined, but she continued to experience episodes triggered by heat and odor. At this point there was suspicion for syncopal convulsions, given the prodrome of feeling hot and nauseated prior to the spells and continued spells despite lack of emotional triggers. Through behavioral interventions such as lying down or cooling off immediately after onset of prodrome symptoms, progression to convulsions was able to be prevented. A new diagnosis of neurally mediated syncope was made. Though the diagnosis of “psychogenic nonepileptic seizures” led to appropriate control of emotional triggers through psychotherapy and medication, this patient remained at risk for syncopal episodes due to other triggers. Awareness of emotions as a trigger for syncope and syncope as a cause of convulsions can lead to appropriate workup and management of syncopal episodes.

No. 213

Delirium: How Does the Blood Test Help Us?

Poster Presenter: Leonardo Hess
Co-Authors: Jaime Mario Kuvischansky, M.D., Antonela Nasello, Javier Monaco, Carla Graziadei, Maria Jimena Matacin, Ezequiel Rodenas, Pablo Bassanese, Romina Martinangeli, Julia Javkin, Manuel Francescutti

SUMMARY:

Introduction Electrolyte imbalances and delirium are frequent problems in hospitalized patients. Although confusional states are consider to be a possible complication of electrolyte disorder it is necessary to analyze the relation these diseases have. Delirium is a neuropsychiatric syndrome characterized by acute change in arousal and cognition arising from an underlying medical injury, it is associated with poor clinical outcome, including personal suffering, cognitive decline, institutionalization after hospitalization, economic costs and risk of death. Methods This is a retrospective and observational study based on 73 patients hospitalized in "Sanatorio Parque", Rosario, Santa Fe, Argentina. The information was collected in a period of 6 months (January 2017- July 2017). All the patients met Confusion Assesment Method (CAM) criteria for delirium. The agitation associated with delirium was measured with the Richmond Agitation-Sedation Scale (RASS). Data were collected from medical records: sub type of delirium, results of blood test, age, sex, clinical diagnosis and the treatment chosen for the management of the condition. The analysed with GraphPad v5.0. Results 102 patients were diagnosed with delirium. 36 of them were dismissed for insufficient data. 54 patients had hyperactive delirium (HD) and 12 hypoactive delirium (HyD). Blood test results were evaluated and most of them had electrolyte imbalances, kidney failure and leukocytosis. Only 8 patients did not present blood test disturbances and were diagnosed as hypoactive, they were all older than 75 years old and had history of cognitive impairment or dementia. The other 4 patients had HyD associated with leukocytosis due to infectious causes. Only 7 patients did not present any electrolyte imbalance, they all had cancer and pancytopenia. 3 of them died the following week. Patients were treated with olanzapine 2.5mg -10 mg /day demonstrating a decrease in the RASS-scale in 24 hs. . First query: mean = 2.8 +/- 1.1 - Second query: mean = 1.2 +/- 1.4 (Pval = <0.01). Those who did not tolerate orally were treated with haloperidol intravenous 5-10 mg / day showing less response. First query: mean = 2.8 +/- 1.1 - Second query: mean = 1.2 +/- 1.4 (Pval = <0.01) Patients who presented as underlying pathology an encephalic cranial trauma, polytum or were over 70 year old required physical restraint. Conclusions The analyzed parameters show differences in the blood test data, according to the presentation of the different types of delirium. It is shown as depending on the different causes of delirium, different approaches are required. The población studied works as a preliminary study, in the future to find predictors of delirium.

No. 214

The Epidemiology of Suicide: A Prospective Study of Risk and Protective Factors Among Suicide Attempters Admitted in an Argentinian General Hospital

Poster Presenter: Leonardo Hess
Co-Authors: Jaime Mario Kuvischansky, M.D., Manuel Francescutti, Ezequiel Rodenas, Javier Monaco, Romina Martinangeli, Antonela Nasello, Carla Graziadei, Julia Javkin, Maria Jimena Matacin, Pablo Bassanese

SUMMARY:

BACKGROUND A suicide attempt is defined as a self-inflected, potentially injurious behavior with a nonfatal outcome for which there is evidence of intent to die. Suicidal thoughts or behavior are not limited to any single diagnostic group or condition. Death by suicide occurs with distressing frequency among many different illnesses, including mood disorders, substance abuse disorders, schizophrenia, and personality disorders. A risk factor is a characteristic, variable, or hazard that increases the likelihood of development of an adverse outcome, 64 which is measurable, and which precedes the outcome. METHODS This is a prospective, descriptive and observational study based on 54 patients admitted in the Emergency department of "Sanatorio Parque", Rosario, Santa Fe. The data were collected in a period of 12 months (January 2016- December 2016). We design a questionnaire

to administrate to each patient with suicide-behavior to define risk assessment. The data were analyzed through the PSPP-Linux software. RESULTS From a total of 54 patients, 43 were women (mean age 30.63 ± 14.8) and 11 men (mean age 42.55 ± 23.12). Pval <0,05. Risk factors, deadliness and severity of the attempt were registered and compared with several variables such as age, sex, schedules, etc. There were many factors related with suicide-attempt risk. This report presents representative data on the protective and risk factors of attempted suicide in an Argentinian population. The majority of the patients were single and had psychiatric history. Most of the attemps were over the weekend. Risk Factors highlighted: age < 20 years old, living alone and family issues as trigger factors. >Lethality: >45 years old, attempt between 0-12 hours; stressful event and chronic disease as trigger factors. CONCLUSIONS This study presents characteristics of self-injurious behaviours in the absence of suicide attempt. Such behaviours are considered to be an aggravating factor, which hinders the patient's progress. These results might be usefull for further investigations.

No. 215

A Narrative Review of Portrayal of Suicide in Art

Poster Presenter: Badr Ratnakaran, M.B.B.S.
Co-Authors: Ayotunde Ayobello, M.D., Tricia Lemelle, M.D., M.B.A.

SUMMARY:

Background: Human emotions, the context surrounding it and mental illness have been an important theme in art. Scenes of suicide and associated maladaptive emotions have also been depicted in famous painitings. Objective: To identify important paintings depicting suicide and themes related to it. Method: A literature search was done on the depictions of suicide in famous paintings and various experts interested in the field of art and psychiatry were contacted via email for their opinions of the same. Sources used from the internet including websites by The Lost Museum Archive, Wikiart, Wikimedia Commons, E.G Bruhl Collections, Leicester galleries, Wellcome Trust, Tate museum, Museum of Modern art, Metropolitan museum, Museo Del Prado and Philadelphia musuem of Art. Paintings portraying suicide were selected and a narrative review was done by the authors. Results: 75 famous paintings were identified that depicted suicide. The paintings mainly belonged to the Western culture ranging from the gothic, renaissance, neoclassicism, romanticism to modern art. The themes depicted have been suicide in relation to important figures from history, mythology, the Bible and scenes of death after suicide. The methods of suicide depicted are self stabbing, hanging, drowning, self poisoning, jumping from a height, self immolation, cutting one's blood vessels and use of firearms on oneself. The reasons of suicide depicted in the paintings can also be contextualized in relation to Emile Durkheim's theories of suicide. Bereavement, imminent execution/ imprisonment, shame, anger, guilt and sorrow have been the important contexts around which the suicides have been depicted. Conclusion: The depictions of suicide and their context help us in understanding the various causes which causes traumatic experiences leading to intense emotions and eventually to suicide. A knowledge of such depictions will help in understanding the perspectives of suicide in different cultures, philosophies and eras in history.

No. 216

Increasing Prevalence of Opiates in Maryland Suicides by Objective Testing (2006–2017)

Poster Presenter: Daniel Borota
Co-Author: Paul Nestadt, M.D.

SUMMARY:

Background: The rate of suicide in the US is on the rise. The most recently reported rate is 13.26 per 100,000 persons, the highest since 1986. Similarly, opiate use is increasing. Substance abuse remains one of the most important risk factors for depression and suicide. Prior studies have found increasing rates of accidental opiate overdose as well as opiate use listed as a contributor to death by suicide. However, these studies have relied on nationally aggregated death certificate data, for which there is a lack of uniform death investigation and documentation across jurisdictions. Unlike most states, Maryland uses a statewide medical examiner system. Under this centralized system, autopsies are performed using strict protocols with full toxicology reports on all suicides and unexplained deaths. Objective

measures of opiate toxicology are collected in a consistent manner across all completed suicides in Maryland. Using this data, we evaluated trends in opiate prevalence in suicide decedents in Maryland. Methods: A retrospective analysis was performed on all 5,876 well-characterized suicides in Maryland from 2006 through the first half of 2017. The proportion of decedents who tested positive for opiates at the time of suicide was calculated for each year and logistic regression was used to assess the change in proportion of opiate positive suicide decedents over the 10 year period, controlling for age, sex, and race. We repeated this analysis for presence of cocaine and for alcohol intoxication (BAL>0.08) to determine if any change in prevalence was unique to opiates. Results: Prevalence of positive opiate toxicology increased significantly from 8.8% in 2006 to 17.7% in 2017. Controlling for age, sex and race, this represents an odds ratio (OR) of 2.24 ($p<0.001$, 95%CI = 1.4-3.5). There was no significant change in the proportion of suicide decedents who were positive for cocaine or alcohol intoxication. The largest increases in positive opiate tests were found in 2014-17. The increase was most prominent in non-white decedents (OR = 11.6, $p<0.001$, 95%CI = 3.1-43.2) and in male suicide decedents (OR = 2.82, $p<0.001$, 95%CI = 1.6-4.9). We subsequently removed overdose suicides from our sample to eliminate deaths where opiates may have been used strictly as a method of suicide. After this correction, the increase in opiate prevalence among suicide decedents became slightly more pronounced (OR = 2.7 $p<0.001$, 95%CI = 1.5-4.6). Conclusion: The presence of opiates in the blood of suicide decedents more than doubled from 2006 to 2017, particularly in the most recent years and most prominently in males and non-white decedents. These results suggest that opiates are playing an increasing role in completed suicides, even outside of overdoses. Increased vigilance and awareness for suicidality is warranted among both opiate prescribers and users. The study was supported by Dr. Nestadt's NIMH Training Grant (T32 MH014592-40).

No. 217

Outcomes of Universal Screening for Suicidality in Medical Outpatient Clinics

Poster Presenter: Dewey Scott Murphy, M.D.

SUMMARY:

As part of standard practice in the outpatient setting, the nurse asks whether a patient has had thoughts of harming self or others. The aim of our study was to determine whether this question was addressed by physicians after a patient had said "Yes" when asked by nursing, and to what extent there was follow-up planning when patients indicated they had suicidal ideation. Luoma et al. (2002) found that around one-third of patients who died by suicide had contact with a mental health provider in the prior month and around one-half of them had contact with a primary care provider in the prior month. These points of contact represent opportunities to assess patients for safety and intervene to prevent suicide attempts. Some providers have concerns that asking about or addressing suicidal ideation could cause the adverse outcome of increasing suicide rates, simply by bringing up the topic. Crawford et al. (2011) found evidence that screening for suicidal ideation does not increase the likelihood of subsequent suicidal ideation. Norris et al. (2012) note that, in spite of insufficient evidence supporting routine suicide screening for all patients, screening patients with risk factors leads to better treatment and management. Vannoy and Robbins (2011) examined 1776 primary care cases and found that, among 128 patients who screened positive for depression, suicidality was discussed in only 13 cases (11%). In our study, we performed a chart review of 246 patient encounters from a wide variety of outpatient clinics in Huntington, WV, including internal medicine, pediatrics, family medicine, surgical specialties, and psychiatry. These encounters were selected for patients having answered "Yes" when asked about thoughts or self- or other-harm at intake. Based on this review, we determined that physicians documented further exploration of suicidal ideation in around half of the cases, with significant variation between specialties. When patients confirmed suicidal ideation to the physician, further planning (e.g. ER, inpatient admission, education, etc.) was documented only around 70% of the time. Regression analysis revealed that the only significant predictive factor for physicians following up on suicidal ideation was the presence of a depressive disorder in the patient's chart. We

determined that these gaps could be addressed by improving communication between nursing staff and physicians and providing better education to providers in all specialties on assessing and managing suicide risk.

No. 218

SKA2 Methylation: Role of Genetics in Suicide

Poster Presenter: Dharminder Singh
Co-Author: Abdolreza Saadabadi, M.D.

SUMMARY:

Suicide is a complex multifactorial behavioral phenotype influenced by hereditary qualities and environmental factors. Various family studies have shown familial conglomeration of suicidal behavior. Most studies have demonstrated a higher rate of suicidal behavior in relatives of suicide victims or attempters contrasted with relatives of non-suicidal controls. Studies have found greater than 50% increase in the risk for suicidal ideation or attempt in offspring of depressed mothers who had attempted or contemplated suicide relative to offspring whose mothers had never attempted suicide. Family studies support a genetic component of suicidal behavior and many genetics markers have been implicated in suicide. SKA 2 gene has been discovered to be suppressed via methylation in the brains of patients committing suicide and predicted suicide behavior due to stress with approximately 80 percent accuracy. SKA 2 gene is located on Chromosome 17 of the human genome. SKA2 gene encodes a protein called SKA 2 known as Spindle and Kinetochore Associated Complex, which is responsible for anaphase in mitosis by regulating chromosomal segregation. SKA 2 is hypothesized to have effects on suicide through dysregulation of the HPA axis in response to stress. In this article we will review the pathophysiological and psychological basis of SKA2 gene in Suicide and implications of future genetic testing using SKA 2 as a biomarker for suicidal behavior.

No. 219

Suicide Attempts, Psychopathological Disorders Associated in People Assisted in a Ward of a General Polivalent Hospital in Buenos Aires, Argentina

Poster Presenter: Edith Serfaty

SUMMARY:

Suicide behavior is a disorder of multiple rough edges in which several factors are involved, which is framed within agressive behaviors. This research was performed in order to obtain an insight into this distressing condition. Objetive: To study the characterization of suicidal behavior in patients both sexes attending the War of Hospital Dr Alejandro Posadas,in Buenos Aires Province, due to a suicide attempt. Materials and Methods : 230 people were examined in the War and in the Psychopathological Servive, due to a suicide attempt, 200 entered in the study and 30 could not do so not being eligible. Three informed consent were used, two belonging to the Hospital Ward and the third one to be completed by the psychiatry service. A data base was created, as well as the statistical analysis. Results It was examined by psychiatrist, 82 males and 118 females, They had antecedents of suicidal behavior in brothers, mother or father. A connection was found between those patients who , committed suicide attempts and the diagnoses of borderline personality disorder, anxiety, severe depression, bipolar and schizophrenia disorders facilitating access to patients in order to perform an early diagnoses and treatment would be a way of avoiding the aggressive behavior relative to the suicide attempt.

No. 220

Association of Suicidal Ideation With Metabolic Syndrome and Its Components in Adults: A Nationally Representative Sample of Korean Population

Poster Presenter: Jeong-Kyung Ko
Co-Authors: Young-Hoon Ko, Kyu-Man Han, Cheolmin Shin, Jae-Hon Lee, M.D., Ph.D., Changsu Han, Yong-Ku Kim

SUMMARY:

Background: A substantial number of studies suggests that depression may be associated with metabolic syndrome (MetS) which refers to the simultaneous presence of impaired glucose tolerance, dyslipidemia, hypertension and obesity. There is controversy, but several researches have shown an association between low cholesterol levels and increased suicide risk. The aim of this study was

to investigate the associations between depression, suicidal idea and MetS in addition to present association between the individual MetS components and suicidal idea. Methods: This study conducted using cross-sectional data for 5,976 people who aged over 19 years older collected by the 2014 nationally representative sample of Korean National Health and Nutrition Examination Survey (KNHANES). The associations between depression and Mets and between suicidal idea and Mets were estimated after adjusting for related factors using multivariable logistic regression analysis. In this study, the definition of depression was divided into following two categories: i) 10 or above on the Patient Health Questionnaire-9 (PHQ-9) score; ii) prior diagnosis of depression by a physician. Results: There was no significant association between MetS and depression after adjusting for age and gender. (PHQ-9 ? 10 and prior diagnosis of depression) (PHQ-9 ? 10: odds ratio [OR] = 1.17; 95% confidence interval [CI] = 0.92 - 1.48, p > 0.1; prior diagnosed depression: OR = 1.18; CI = 0.76 – 1 86, p > 0.1). However, suicidal ideation was considerably associated with MetS after adjusting for age and gender (OR = 1.53; CI = 1.04 – 1.23, p = 0.03). Suicidal ideation was also associated with the individual MetS components including high triglyceride (OR = 0.54; CI = 0.39 – 0.76, p < 0.001) and high fasting glucose level. (OR = 0.726, CI =0.48-0.96, p = 0.028) Limitations: This study based on a cross-sectional study design with few adjusting factor. Lack of a standardized objective measure for depression may limit our results. Conclusions: In this study, adults with metabolic syndrome were more likely to have suicidal idea in Korean adult. Several previous studies have suggested an association between low cholesterol levels and increased suicide risk, however the findings in this study showed different results. Specifically, high triglyceride, high fasting glucose level and obesity were associated with suicidal ideation in adults. Our study provide an implication that managing these components of MetS may help reduce suicidal risk in adults.

No. 221

A Spanish Study of Patients With a Background of Substance Use Disorder After Suicide Attempt

Poster Presenter: Jose Maria Portes
Co-Authors: Jesus Gomez-Trigo Baldominos, Manuela Perez Garcia, Alfonso Mozos Ansorena, Cecilia Blanco Martinez, Monica Mourelo Farina, Manuel Arrojo Romero, Eduardo S. Paz Silva, Mario E. Paramo Fernandez

SUMMARY:
Background: The risk of suicide in patients with Substance Use Disorder (SUD) is six times greater than in the rest of population. Describing the type of patient with SUD who performs suicide attempt is essential to identify risks within this population. In previous studies, the highest prevalence of the female gender has been found within the population with SUD that performs suicide attempts. Likewise, affective disorders and personality disorders are the comorbid pathologies that appear most frequently in suicides and suicide attempts. The objective of the study is to collect the main characteristics of the type of patient requiring urgent hospital care, with history of SUD, comparing with those who have not got this disorder in their history. Methods: prospective study was conducted with sample n=88 subjects. Risk factor to be analyzed: toxic substance use. Time period: one year. SPSS computer statistical pack was used. A data collection protocol was applied, with different variables. Results: Our sample sociodemographic profile was a woman (66.7%), single (69.7%), living alone (45.5%), with primary studies (57.6%) and unemployed (51.5%). The most common comorbid psychiatric diagnoses were personality disorders (47.06%) and affective disorders (25.53%). 39.4% of patients requiring entry into the Intensive Care Unit, had history of SUD versus 23.52 who did not. Conclusions: From the results obtained, relationship between SUD and other psychiatric pathologies, especially personality disorders, can be extracted. Results in parameters such as planning and possibility of rescue in suicide attempts of our study, show a potential relationship between the impulsive character in personality disorders. Identifying suicide risk factors in the population with SUD by describing patients who perform autolytic attempts that need hospital care is a fundamental pillar to focus psychiatric attention in certain sectors of users of devices specialized in addictions disorder, in order to manage the supervision and surveillance in patients that fit the results obtained in this study, described in the profile patient of our sample.

No. 222

Suicide Attempt in African Americans After Hospitalization in First-Episode Psychosis: A Case Report and Literature Review

Poster Presenter: Khurram Saleem Janjua, M.D.
Co-Authors: Kelvyn Rafael Hernandez Tejada, M.D., Tresha A. Gibbs, M.D.

SUMMARY:

Patient is a 22 years old African American (AA) male, adopted, recently graduated college, currently unemployed, recently discharged from inpatient unit after presenting with 6 months of paranoid ideation, depressed mood, functional decline, and self-isolation. He reported a history of 2 prior suicidal gestures. He was initiated on an oral antipsychotic and antidepressant with good effect. He was discharged with a diagnosis of schizophrenia. Within 2 weeks of discharge, patient became acutely suicidal following a failed attempt to go on a job interview. He overdosed on his psychiatric and antihypertensive medications. He was taken for medical evaluation where he was re-admitted to the psychiatric unit. Introduction: The post hospitalization period is high risk period for suicide, particularly in patients with mental disorders. Irrespective of diagnosis, completed suicide rates are at least 10-20 times greater in patients with psychiatric diagnosis within 90 days of discharge than that of patient without mental disorder diagnosis. First episode psychotic patients are at particularly high risk with 1/10 attempting suiciding within 1 year of hospitalization. Studies have found that predictors of suicide attempt include history of suicide attempt, severe depression, history of antidepressant treatment, and alcohol and substance abuse. According to NSAL, there is a 4% prevalence of suicide attempts among the general population of African Americans in US. Among African Americans, limited information is known about suicide attempts post hospitalization. Methods: In depth literature search conducted to explore terms such as suicide, first episode, psychosis, hospitalizations, race, ethnicity, and black. Data/Results: Few studies focus on the ethno cultural aspects of suicidality in the AA and Latino first episode psychosis patient particularly post hospitalization. Discussion/Conclusions: Clinicians should be aware of the high risk of suicidal behavior in the post hospitalization period, particularly the first 90 days. Among African Americans, particular attention should be paid to hopelessness, depression and locus of control. Factors such as income may not be so pertinent risk. Culturally sensitive interventions are important with awareness of protective factors such as religious coping styles.

No. 223

Blue Monday Is Real for Suicide: A Case-Control Study of 188,601 Suicide Victims

Poster Presenter: Kyoung-Sae Na, M.D.
Co-Authors: Seong-Jin Cho, Seo-Eun Cho

SUMMARY:

Objective: Many studies have reported that suicides tend to occur on Mondays. However, owing to a lack of controls, conclusive findings on the potential effects of a day of the week on suicides have been lacking. Method: We analyzed public data for causes of death from 1997 to 2015 in the Republic of Korea. Accidental death was used as a control group. The probability of suicide on each day of the week according to age group was calculated. Results: A total of 377,204 deaths (188,601 suicides and 188,603 accidental deaths) was used. The frequency of suicide was highest on Monday and decreased throughout the week until Saturday. Accidental death was highest on Saturday and showed no variations according to weekday. For people in their teens and 20s, the probabilities of suicide on Monday were 9% and 10% higher, respectively, than those on Sunday. As age increased, the differences in suicide probability according to the day of the week were attenuated. Conclusions: The so-called “Blue Monday” effect is real, particularly for people in their teens and 20s. Suicide prevention strategies that aim to attenuate the burden and stress of Mondays should be planned.

No. 224

Treatment Utilization Before Suicide in Patients With Traumatic Brain Injury

Poster Presenter: Mansi Seth Chawa, M.D.
Co-Authors: Rebecca Rossom, Deepak Prabhakar, M.D., M.P.H., Edward Peterson, Cynthia Di Giandomenico, M.D., Christine Lu, Beth Waitzfelder,

Ashli Owen-Smith, Arne Beck, Gregory Edward Simon, M.D., L. Keoki Williams, Frances Lynch, Brian Ahmedani

SUMMARY:
Background Traumatic brain injury accounts for approximately 50,000 deaths in the United States annually. Our previous study found that traumatic brain injury (TBI) increases risk of suicide by more than 8-fold, even after adjusting for mental health conditions, age, and gender. Suicide risk has been observed to remain chronically elevated and could persist for 15 years or more after TBI. The objective of the current study was to determine variations in general health care visit patterns for patients with TBI who die by suicide and compare them to matched controls (patients with TBI who did not die by suicide) in a large diverse US population. Methods This is a study from Mental Health Research Network that involves data from eight geographically diverse health systems across the US. We used electronic health record data to assess multiple healthcare factors within the year before an index date (the date of death for cases and a matched date for controls). Official state mortality data were linked to health system records. Conditional logistic regression was used to compare variations in visit patterns among cases and controls. Additional analysis for assessing demographic and other behavioral health factors was also conducted. Results A total of 61 cases with TBI who died by suicide were compared to 75 matched controls. The more frequently patients had clinic visits for their TBI, the less likely they were to die by suicide (aOR=0.29, 95% CI: 0.12-0.68). However, patients who had a more remote clinic visit were less likely to die by suicide than those with a more recent clinic visit (aOR=0.93, 95% CI: 0.89-0.98). Conclusions Patients with TBI who died by suicide tended to visit clinicians less frequently than patients with TBI who did not die by suicide. However, the most recent visit before the index date was closer for patients who died by suicide than those who did not. This indicates that clinicians have an opportunity to intervene and assess risk factors prior to patients ending their life. While this study helps in identifying variations in visit patterns for TBI patients, future studies with larger sample size are required to confirm these findings.

No. 225

Differences in Health Care Use in the Year Prior to Suicide Death: A Population-Based Case-Control Study

Poster Presenter: Megan Chock

SUMMARY:
Background: Suicide is the 10th leading cause of death in the United States. Many studies describe suicide decedents' healthcare contact in the year before death, but few have compared healthcare use between suicide decedents and similar others. This population-based case-control study examines healthcare use of suicide decedents and age- and sex-matched controls in a diverse U.S. population. Methods: Suicide decedents who were members of a large health maintenance organization from January 1, 2008 to December 31, 2014 were identified using mortality data. Each case was matched to three controls. Healthcare use in the year before suicide death was classified by setting (inpatient, outpatient, emergency, and home visits) and visit type (mental health or non-mental health reason, primary or non-primary care). Demographic data including the Charlson Comorbidity Index (CCI) were collected for each subject. Matched analysis via conditional logistic regression was used to explore the relationship between risk of suicide death and frequency and type of visits in each quarter prior to death, and to test for associations between suicide death and other factors. Results: The analysis included 1221 cases and 3663 age- and sex-matched controls (mean age 52.8, 76.6% male). Cases were more likely to have had a mental health diagnosis (62.1% vs 20.1%, $p<0.01$) and a higher level of physical comorbidity (CCI 1.3 vs 0.9, $p<0.01$). Cases and controls did not differ in having had at least one visit in the past year (95% CI 0.9-1.7), but cases had significantly more visits overall (mean 17.5 vs 8.0, $p<0.01$) and for mental health reasons (mean 0.6 vs 5.5, $p<0.01$). Cases were more likely to have had inpatient (95% CI 1.3-1.9) and emergency (95% CI 1.3-1.6) visits for non-mental health reasons. Cases were not more likely to have had outpatient non-mental health, homecare or other visits. Cases, but not controls, showed an increasing frequency of healthcare use closer to death (5.7 visits 0-3 months before death vs 9-12 months before death) in

higher-cost, non-primary care settings (emergency, inpatient, and outpatient specialty care). Conclusion: Suicide decedents have distinct patterns of healthcare use before death. Patients with a mental health diagnosis and more physical comorbidities with an increasing frequency of healthcare visits, especially in inpatient and emergency settings, should be considered at higher suicide risk. Suicide prevention has focused on primary care and mental health screening. The vast majority of cases and controls were not screened using the standardized instrument available to providers. This study shows that specialty care providers have a key intervention role as suicide decedents appear to increase outpatient non-primary care visits for mental health and non-mental health reasons. With electronic health records, we can flag patients with these patterns of increased healthcare use for suicide prevention in all care settings.

No. 226

Factors Associated With Outpatient Treatment Compliance of the Suicide Attempter Visiting Emergency Center

Poster Presenter: Min-Je Lee

SUMMARY:

Objective: The purpose of this study is to research factors which affect the compliance of psychiatric outpatient follow-up treatment to the suicide attempting patients in the emergency room. Methods: We reviewed the medical records of 346 suicidal attempters who were discharged from emergency center of the Chungbuk National University Hospital from January 1, 2014 to December 31, 2015. They were divided into two groups: patients who came for OPD follow up treatment and patients who did not. We gathered a data including psychosocial characteristics and factors related to suicide and factors related to psychiatric treatment. After classifying the patients, we compared and analyzed the factors which could influence each group. Results: After being discharged, 233 patients did not show up for OPD follow up treatment and 113 patients came for OPD follow up treatment. There were significant differences between the two groups in the drunken status, lethality of Suicide Attempt, time of presentation to ER, and OPD waiting time. But, sociodemographic characteristics, medical condition did not influence the outpatient follow up compliance. Conclusion: There were significant differences in factors that affect the outpatient follow up compliance between the two groups. Additional research is required to increase outpatient follow up compliance.

No. 227

Physician Suicide: A Silent Epidemic

Poster Presenter: Omotola O. T'Sarumi, M.D.
Co-Authors: Ayesha Ashraf, M.D., Deepika Tanwar, M.D., Adrienne Hicks, M.D.

SUMMARY:

Physician Suicide: A Silent Epidemic Omotola T'Sarumi, MD, Ayesha Ashraf, MD; Tanwar Deepika, MD; Adrienne Hicks, MD; MD; Eric Rubin, MD Objective: Suicide among physicians has received more publicity as studies report rates higher than that of the general population or among any other profession. In the US an estimated 1 physician dies every day from suicide, with a yearly total of about the equivalent of an entire medical school. Risk factors associated with higher rates of suicide among doctors have been identified, but little has been learned about prevention. We review here reports describing the occurrence and interventions to prevent physician suicide. Method: We reviewed reports mainly in MEDLINE and Pubmed published in the last 10 years. Results: Doctors have the highest suicide rate of any profession. The suicide rate among physicians is 28-40 per 100,000, more than double that in the general population. Female physicians attempt suicide far less often than women in the general population, yet their completion rate equals that of male physicians and, thus, far exceeds that of the general population (2.5-4 times the rate by some estimates). The most common psychiatric diagnoses among physicians who completed suicide were mood disorders, alcoholism, and substance abuse. In a Facebook-based survey of 2106 female physicians , 50 % reported meeting criteria for a mental disorder but were reluctant to seek professional help due to the fear of stigma. The most common means of suicide by physicians is by medication overdose and firearms. There is little consensus on effective means of preventing physician suicide. Fear of stigma is a

major obstacle for treatment. Some studies question the effectiveness of physician health programs (PHP). The most promising intervention reported was a web-based CBT program which was associated with reduced suicidal ideation among medical interns. Conclusions: Suicide amongst physicians is an under-recognized public health concern. To date, treatment interventions have not lowered the rates of physician suicide. To reduce the number of physicians taking their life, fear of stigma and other risk factors have to be addressed through more research aimed at effective and early intervention.
Key words: Physician; Suicide; Prevention

No. 228

Risk of Suicide Death in Individuals With a History of Suicide Attempt(s)

Poster Presenter: Simran Singh Chawa, M.D.
Co-Authors: Deepak Prabhakar, M.D., M.P.H., Brian Ahmedani

SUMMARY:

Background: According to the Center for Disease Control and Prevention (CDC), in the U.S., from 1999 to 2014, the age-adjusted suicide rate increased from 10.5 to 13.0 per 100,000, furthermore, the rise has been the greatest since 2006. Previous suicide attempts are understood to be one of the significant risk factors for completed suicide. The objective of our study is to examine population level data collected from the U.S. population examining attempted suicide as a risk factor for completed suicide. Methods: We conducted a case-control study involving Mental Health Research Network (MHRN), a consortium of 13 learning healthcare systems, 8 of which participated in the study. The study involved a total of 2,674 Case individuals who died by suicide from 2000-2013. Controls were selected in a 100:1 ratio for a total of 267,400 individuals who were matched by site and time period. Results: Male victims of suicide death had an OR of 160.7 to have had previous suicide attempts, compared to females who had an OR of 206.9. Individuals who were diagnosed with one of the major psychiatric conditions had lower odds (34.0) of previous suicide attempts compared to individuals who weren't diagnosed (405.7). The OR of previous suicide attempt in individuals who died by suicide was 814.3 for those aged 10-14, 45.4 for those in age group 15-24, 197.9 for those aged 25-44, 197.5 for ages 45 to 64, and 288.6 for those older than 65. For individuals who were diagnosed with Major Depression, the odds of having a previous attempt were 27.4 compared to 314.7 for those who didn't have the diagnosis; for bipolar disorder, the odds were 14.2 vs. 151.5 for those diagnosed vs. not. For patients with drug abuse, the odds were 12.3 for those with diagnosis, vs 165.5 for those without diagnosis. For patients with schizophrenia, the odds were 21.3 vs 142.8. For those with anxiety, the odds were 29.8 vs 187. For those with ADHD, the odds were 51 vs 152.5. Conclusion: Females who died by suicide had a higher chance of previous suicide attempts compared to males. The risk of death by suicide was high across all age groups, but the odds were especially high for individuals on the opposite end of age spectrum. Mental heath diagnosis was associated with a lower risk of suicide death in individuals with prior attempts. Our study should help quantify the risk of suicide in individuals with history of suicide attempts. Future studies should investigate care utilization patterns among those who had a suicide attempt prior to death by suicide.

No. 229

Are Guns and Suicide Related?

Poster Presenter: Simrat Sarai
Co-Authors: Hema Mekala, Steven B. Lippmann, M.D.

SUMMARY:

Shooting oneself to death is nearly twice as common as gun-related homicides in the United States, and the lethality of a suicidal gunshot is extremely high. There are about 20,000 firearm-induced suicides each year, over 50 each day. Suicide among veteran populations is at epidemic proportions. Having a gun and ammunition readily accessible in the home is a major factor that facilitates completed suicide. Most firearm-related attempts result in a fatality. Even though most suicidal impulses are intense, they commonly are brief in time duration. Definitive action, especially by the family, is important during that period. Most of the people who try to kill themselves, but survive, do not later end-up committing suicide. Having a firearm easily available is closely associated an increased risk of suicide; just removing access decreases dangerousness. Anyone with ready access to a gun and ammunition is even

more likely to commit suicide than those who do not have ammunition also available. Doctors should stress a recommendation that firearm availability be removed from anyone experiencing depression, acute grief, suicidal thoughts, substance abuse, high impulsivity, or those with psychiatric and/or neurologic ailments. Physicians should also provide guidance about safe storage; this means that guns and ammunition are to be locked-up in separate locations and that firearms remain unloaded. Just following such safer weapon storage strategies greatly reduces gun-shot death by suicide, impulsive acts, and for accidents.

No. 230

Characteristics Affecting Suicide Method: Based on the Analysis of Suicide Mortality Data in One District of Seoul

Poster Presenter: Sungjune Bae

SUMMARY:

Objectives Suicide has become the most serious public health problem in Korea. In this study, we investigated the demographic and social characteristics affecting the suicide methods. Methods Data of suicide deaths reported from 2008 to 2014 in Yeoungdeunpo-gu, Seoul were reviewed and analyzed. Demographic data and characteristics including age, gender, education level, the time of death, the place of death, and the method of death were examined. The variants of each suicide death method were compared using Chi square and Fisher's exact test. Spearman correlation analysis and logistic regression analysis were performed, respectively. Results More than half of suicide victims (68.4%) were male. The most frequent suicide deaths were in the spring (March to May, 29.1%), during the afternoon (noon to 6:00 pm, 33.4%). Hanging(59.4%), jumping (17.0%), and gas intoxication (8.9%) were the most frequent suicide methods. The risk of drug intoxication was increased in old age, out of residence, while that of gas intoxication was associated with male, young age, winter. The risk of hanging was related to low education level and the risk of drowning was increased in female, old age and summer. Conclusion The suicide method was associated with age, gender, time, season.

No. 231

Case Management Plus Second-Generation Long-Acting Injectable Antipsychotics as Preventive Strategy of Suicide Among People With Severe Schizophrenia

Poster Presenter: Sylvia Díaz

Co-Author: Juan J. Fernandez-Miranda

SUMMARY:

Background Adherence to treatment of people with severe schizophrenia is important to reach clinical and rehabilitation goals and to prevent suicidal behaviour. The purpose of this study was to know the retention in treatment of people with severe schizophrenia, suicide rates among them and factors related (standard treatment vs comprehensive case managed and oral vs long-acting injectable medication) Methods 8-year prospective, observational, open-label study of patients with severe schizophrenia (GCI-S>=5) undergoing community based, comprehensive, case managed treatment in Gijon (Spain) (N=200). Assessment included the Clinical Global Impression severity scale (CGI-S) and the WHO Disability Assessment Schedule (WHO-DAS). And also medications prescribed, laboratory tests, weight , adverse effects reported, hospital admissions and reasons for treatment discharge., including deaths by suicide, were recorded. Results CGI-S at baseline was 5.9(0.7). After eight years 42% of patients continued under treatment (CGI-S= 4.1 (0.9); p<0.01); 37% were medical discharged (CGI=3.4 (1.5); p<0.001) and continued standard treatment in mental health units; DAS decreased in the four areas (self-care and employment p<0.01; family and social p<0.005) in both groups; 7% had moved to other places, continuing treatment there; 10% were voluntary discharges. Twelve patients died during the follow up, four of them by suicide (2%; suicide rates among people with schizophrenia in standard treatment in Spain between 5-10%). All patients had their own case manager, mainly a nurse (89%). 65% of all patients were treated with second-generation long-acting-injectable antipsychotics (risperidone, paliperidone and aripiprazol). Among them, there was higher retention (4 vs 16 patients voluntary discharges; p<0.01) and less suicides than patients with oral antipsychotics (1 vs 3 patients).

Conclusions Retention in treatment of patients with schizophrenia with severe symptoms and impairment in a comprehensive, community based, case managed programme and treated with second generation long-acting antipsychotics was really high and seemed to be useful to decrease the high rates of suicide among them. Both treatment characteristics (case management and 2G-LAI antipsychotic use) helped to improve treatment compliance and suicide rates compared with standard treatment and oral medications.

No. 232

Low Conscientiousness and Less Motivation and Competence in ADHD Patients: Their Relation to Their Well-Being

Poster Presenter: Javier Irastorza

SUMMARY:

Adult ADHD are characterized by strong heterogeneity in cognitive underperformance with multiple cognitive memory pathways, inhibitory control, delay aversion, decision making, timing, response variability and emotional regulation. Motivationally based ADHD models shift the focus from inattention to impairments in motivation and offer an alternate view for difficulties affecting task completion in people with ADHD. Personality dimensions (NEO-PI-R) associated to them are: lower Agreeableness, Conscientiousness and Extraversion and higher Neuroticism. Based on a cross-sectional adult ADHD outpatients study, authors observe a correlation between conscientiousness and inattent subtype. Therefore the authors expose some ideas about competence components and implicit and explicit motivational systems. ADHD patients may have associated learning disorders; they may be more creative and practical and usually have less analytic thinking. They have less metacognition and motivation, even more in the long time. A good way of increasing motivational competence will help people access their implicit motives and will promote goal specific competences and their well-being.

No. 233

Study of Factors Affecting on Evaluation of Sex Offenders' Criminal Responsibility

Poster Presenter: Jinwoo Kim

Lead Author: Jonghuk Choi
Co-Authors: Seyoung Oh, Jangwon Lee

SUMMARY:

Objective: This study analyzed factors affecting feeble-mindedness or insanity following a forensic evaluation for sex offenders, and to present a scientific basis that can provide practical assistance on a responsibility evaluation of sex offenders. Methods: This study analyzed retrospectively 180 mental appraisals on sex offenders among mental appraisals documented by one psychiatrist from June, 2012 to December, 2015 at the National Forensic Hospital. Results: Of the 180 mental appraisals, 123 people (68.3%) were found to be feeble-minded or insane, and 57 people (31.7%) were considered to be sane, i.e., competent to take responsibility. The two groups were different in IQ, occupational & marital status, victim numbers, psychiatric diagnosis, and sex offender characteristics, such as violence and intrusiveness. After evaluating the influence of variables that showed significant differences between the two groups on a responsibility assessment, sex offenders with fewer invasive sex offenses (OR=1.763, $p<0.05$), lower IQ (OR=1.031, $p<0.01$), lower numbers of victims (OR=1.349, $p<0.05$), and higher number of mental illnesses (OR=0.507, $p<0.05$) were more likely found to be feeble-minded or insane. Conclusion: This study indicates that criminal responsibility may be intact in repeat sex offenders who commit invasive sex crimes, such as rape, and is without intellectual disability compared to other kinds of sex offenders. Subsequent research will be needed to improve the objectivity and reliability of mental appraisals on sex offenders in the future. This study have no financial conflicts of interest

No. 234

Aging as a Long-Term Resident of an Intermediate Security Forensic Hospital

Poster Presenter: Vera Prisacari

SUMMARY:

Patients found Not Guilty by Reason of Mental Disease or Defect (NGRMDD) are hospitalized for some period of time following acquittal. These individuals often spend more time institutionalized than their counterparts convicted of the same

offense. Insanity acquittees are civilly committed without a specified maximum release date and are integrated into the community only when determined safe. This case study involves a 69 year old patient who was found NGRMDD on murder charges. He has resided in a forensic hospital for over 20 years during which period his psychiatric diagnoses resolved and he is no longer taking any psychotropic medication and as such provides an example of aging within a forensic institution. While the patient has struggled emotionally with lifestyle restrictions, this poster shows that it is possible to meet strict dietary requests, exercise needs, and micronutrient requirements over long term and age healthily in medium security forensic hospital.

No. 235

New Rulings on Involuntary Psychiatric Treatment

Poster Presenter: Viviana Alvarez Toro, M.D.

SUMMARY:

Historically, psychiatry has often been portrayed as a paternalistic field where people are often forced into treatment in traumatic ways. Nevertheless, many laws and regulations have been passed over time to strengthen and reaffirm individual autonomy. Several landmark cases, particularly Washington v. Harper, Riggins v. Nevada, and Sell v. United States, have been instrumental in shaping the legal standards for involuntary administration of psychiatric medications at a federal level. These cases set the stage for two recent cases, DHMH v. Kelly (2007) and Allmond v. DHMH (2016), that have been determinative in influencing the practice of psychiatry in Maryland. By taking these cases into account, this poster seeks to highlight the history of involuntary administration of medications to the mentally ill. It will also target the ongoing controversies that this topic continues to raise across the country in both an inpatient and outpatient setting. This is particularly significant for states such as Maryland, where assisted outpatient treatment still does not exist.

No. 236

Mental Health and the Criminal Justice System: An Ethical Imperative for Reform

Poster Presenter: Zain Khalid, M.D.

SUMMARY:

Incarceration rates have soared in the US since the 1970s. At present the US incarcerates approximately 700 per 100,000 of its citizens, more than any of its liberal democratic peers. This expansion in the penal population has engendered extensive investigative interest and many contributory factors have been noted in literature, including the War on Drugs, mandatory minimum and three strike laws, an adversarial policing culture and deinstitutionalization of the mentally ill. These policy measures have often been informed by beliefs and perspectives that prioritize individual agency over structural and socioeconomic determinants of crime. The result has been a widening of preexisting socioeconomic and health disparities among vulnerable populations such as the mentally ill, the poor and racial and ethnic minorities. Mental health problems are in fact not only disproportionately prevalent among the incarcerated, they are also frequently exacerbated by incarceration. Substance abuse problems which affect approximately half of state and federal prisoners are frequently under-treated in correctional settings. The underutilization of medication assisted treatments for opioid use disorder for example is a particularly concerning instance of such under-treatment. Excessive incarceration has also been show to have significant deleterious impacts on the mental health of the communities overrepresented in the correctional system. A recent Bureau of Justice Statistics Report on Mental Health Problems reported by Prisoners and jail inmates noted 1 in 7 state and federal prisoners and 1 in 4 jail inmates as reporting experiences that met the criteria for severe psychological distress. Negative effects of parental incarceration on families, particularly children's mental health and subsequent delinquency are also well documented. In recognition of these alarming realities that attend the present carceral system and it's association with mental health challenges, this review examines the role psychiatrists particularly those involved in correctional settings can play in stimulating and catalyzing criminal justice system reform, and the ethical imperative that bears on it. It focuses in particular on advocacy for more equitable provision of mental health treatment, and summarizes the evidence for the potential salutary effects of decarceration policies, community

corrections programs, diversion of the mentally ill and those with substance abuse problems away from traditional criminal justice system as via Veteran treatment courts as well as recent innovations such as forensic community treatment teams to reduce recidivism, facilitate re-entry and address structural determinants of crime.

No. 237

Major Depressive Disorder Secondary to Hyperparathyroidism

Poster Presenter: Ahsan Syed Khalid, M.D.
Co-Author: Melissa Martinez, M.D.

SUMMARY:

Major depressive disorder (MDD) has many causes and ruling out primary medical causes is essential for determining treatment options and management. We present a case of a 64 yo female with multiple medical comorbidities and history of treatment refractory MDD (with positive pan-SIGECAPS). The patient was eventually found to have increasing calcium levels and symptoms of hyperparathyroidism with a parathyroid adenoma. Following removal of the adenoma, the patient showed remarkable improvement in depression symptoms both subjectively and objectively, as reflected in PHQ-9 scores. It is important for physicians to be vigilant, recognize potential medical causes of MDD, and treat underlying etiologies in an effort to provide optimal patient care.

No. 238

Comparison of Recovery Times From Neuroleptic Malignant Syndrome: Typical Versus Atypical Antipsychotics

Poster Presenter: Elise Griffin
Co-Authors: Andrew J. Powell, M.D., Suporn Sukpraprut-Braaten

SUMMARY:

Comparison of Recovery Times from Neuroleptic Malignant Syndrome: Typical vs Atypical Antipsychotics Co-authors Suporn Sukpraprut-Braaten, MSc, MA, Ph.D., Andrew Powell, M.D. Abstract Background: Neuroleptic malignant syndrome (NMS) is a diagnosis of exclusion caused by taking dopamine blocking drugs and resulting symptoms of fever, muscle rigidity, mental status changes and autonomic instability that can end in fatality. This study compared the recovery times and treatment modalities of patients with NMS who were taking atypical antipsychotics versus typical antipsychotics. Methods: Data for this meta-analysis study was extracted from several different medical databases. Keywords used included neuroleptic malignant syndrome (NMS), atypical antipsychotics and NMS, typical antipsychotics and NMS, second generation antipsychotics and first generation antipsychotics were used for article search. Over 1,600 articles were found. From the pooled data obtained, after exclusion criteria were applied, we compared time to recover from NMS between patients taking typical versus atypical antipsychotics, as well as comparing which treatment modalities contributed to speed of recovery. Results: This analysis included 48 patients. The atypical group included 22 patients comprising 15 males and 7 females having an average age of 41.7 years. The typical group included 26 patients comprising 11 males and 15 females having an average age of 30.8 years. Patients with NMS in the atypical group took a shorter time to recover (mean=9 days) than patients in the typical group (mean=28 days). There was a slight difference in recovery time between single (mean=23 days) vs. multiple (mean=19 days) NMS treatment modalities. Patients without any treatment took an average of 6 days to recover. Patients with a combination of 3 treatment modalities took an average of 61.5 days to recover. The patients treated with Amantadine alone took an average of 4 days to recover. Conclusion: Subjects in the atypical antipsychotic group were shown to take less time to recover from NMS than those in the typical antipsychotic group. Treatment with Amantadine alone led to shorter recovery time but was not shown to significantly differ from using no treatment. Patients using a combination of 3 or more treatment modalities took a longer time to recover than any other treatment modality group. Although data shows overall that patients being treated with 2 or more treatment modalities recovered faster than patients treated with only one modality, the data suggests that recovery time with multiple treatment modalities would have been shorter if the 3+ treatment data weren't included. These results suggest that if treating NMS with

multiple modalities that the number of treatments be limited to two.

No. 239

Escitalopram-Induced Hypoglycemia? A Case Report and Review of Literature

Poster Presenter: Mariana Mello
Co-Authors: Juliano Victor Luna, M.D., Lourdes Thalita Meyer de Andrade Cavalcanti, M.D.

SUMMARY:
A 24-year-old woman sought psychiatric outpatient care in a general hospital due to a 7 month history of anxiety and panic disorder symptoms. The patient had been diagnosed with type 1 diabetes since the age of 7 and was currently using regular insulin subcutaneous pump. Escitalopram 10 mg was started and the patient had symptomatic hypoglycemic episodes within the first month of the antidepressant (AD) use. No other causes of hypoglycemia were found. Her endocrinologist lowered insulin doses while escitalopram was maintained. Her glycaemia was stabilized then. Discussion: Anxiety is a common comorbidity in diabetes, some studies have showed that 15 percent of the patients have generalized anxiety disorder and 40 percent have elevated symptoms of anxiety[1].Although there are few studies involving anxiety and diabetes, co-morbidity of these two afflictions may have a significant morbidity, with outcomes such as an increased risk of hypertension, inflammation, and difficult glycemic control[2]. Case reports describe hypoglycemia in patients with diabetes mellitus that use AD, arguing that in an unknown way they could change blood glucose metabolism by an increase in insulin sensitivity that would lead to a higher risk of hypoglycemia. This was associated to AD with higher affinity for the serotonin reuptake transporter. AD use increases almost three times the risk of hypoglycemia, with the need of hospitalization in some cases[2]. On the other hand, some studies showed high levels of inflammatory reactions in patients submitted to stress induction, in a simulation of panic disorder. Chronic cortisol release could contribute to hyperglycemia in these patients. A meta-analysis related anxiety disorders with hyperglycemia, but it's underlying mechanisms were not clarified[2]. There is a possibility that control of anxiety and panic disorder symptoms could low cortisol and systemic inflammation levels, and therefore the need for insulin. Escitalopram direct hypoglycemic effect may also be considered[2]. As the patient used insulin pump, the maintenance of same insulin doses may have resulted in hypoglycemic episodes.

No. 240

Race-Implicit Associations in Mental Health

Poster Presenter: Amalia Londono Tobon, M.D.
Co-Authors: Michael Howard Bloch, M.D., Jerome Henry Taylor, M.D.

SUMMARY:
Background: Implicit biases among healthcare providers can have significant consequences for the care that patients receive. Most of the literature on provider biases has been performed in non-psychiatric medical specialties. Furthermore, there is a dearth of rigorous studies that evaluate disparities in diagnosis and treatment of psychiatric diagnosis. This study aims to gain a greater understanding of implicit racial association among mental health practitioners. In particular, the presence of implicit racial biases among mental health practitioners in regard to (1) psychiatric diagnosis (psychosis compared to mood disorders); (2) medication choice (antipsychotics compared to antidepressants) and (3) provider expectations regarding compliance (compliance compared to non-compliance). Methods: Mental health and other practitioners and trainees were recruited via e-mail and social media to complete an anonymous 25-minute online survey. The online study included demographic questions, exposure to black individuals, and measures of empathy, burnout, and depression, as well as three Implicit Association Tests (IAT) relating to diagnosis, medication treatment, and compliance. Participants were provided with educational material regarding implicit biases at the completion of the study. Result: Initial results from the first 120 providers demonstrated a modest, statistically significant association suggesting implicit biases associating black faces with psychotic (as opposed to mood) disorders, antipsychotic medication (as opposed to antidepressant medications) and non-compliance. We will present the final results from this study at the APA after recruitment is completed in November 2017. These results will include a larger sample size

and secondary analysis of the data to examine correlates of stronger implicit associations. Conclusions: Implicit associations in mental health can affect the diagnosis and treatment of patients. This study highlights the need for ongoing rigorous evaluation of implicit attitudes in mental health. Future research should examine the (1) association between implicit biases and actual physician behavior and (2) examine the ability of educational interventions to reduce implicit biases in health care providers. This study was supported by the American Psychiatric Association/ Substance Abuse and Mental Health Services Administration Minority Fellowship Program.

No. 241

Association of Treatment Response With Obesity and Other Metabolic Risk Factors in Adults With Depressive Disorders

Poster Presenter: Hyungsook Hong
Co-Authors: Young Sup Woo, M.D., Taeyoun Jun, M.D.

SUMMARY:

Association of treatment response with obesity and other metabolic risk factors in adults with depressive disorders Co-Authors Hyungsook Hong, M.D., Young Sup Woo, M.D., Taeyoun Jun, M.D. Background: Available studies indicate that obesity may exert a moderational effect on antidepressant treatment response. The aim of this study was to investigate the relationship between treatment response and metabolic abnormalities amongst patients with depressive disorders in a large naturalistic clinical setting. Methods: A nationwide prospective study was conducted in 18 hospitals in South Korea; 541 depressive patients meeting DSM-IV criteria were recruited. After baseline evaluation, subjects received naturalistic clinician-determined antidepressant interventions. Assessment was performed at baseline and weeks 1, 2, 4, 8, 12, 24 and 52. Treatment response was defined as a Z50% reduction from baseline on at least one evaluation point. Results: In univariate comparison, the patients who showed insufficient response to antidepressant therapy were more likely to be male, unmarried, unemployed, and obese. After adjusting for baseline variables, male sex (OR¼1.82) and obesity (OR¼1.55) remained as were significant variables. Stratification of the subjects into one of three groups, i.e. male, pre-menopausal female and post-menopausal female, revealed that males with concurrent metabolic problems, (i.e. the presence of one or more of hypertension, hyperglycemia, or hypercholesterolemia) had significantly higher risk for insufficient response (OR¼2.32) and, after adjusting for baseline variables, obesity predicted insufficient response in post-menopausal female (OR¼2.41). Conclusions: The presence of metabolic abnormalities in patients with depressive disorders was associated with decreased treatment response to antidepressants. These results underscore the neurobiological relationship between obesity and the central nervous system, and provide empiric evidence supporting stratification of treatment response in depression.

No. 242

Decreased Health-Seeking Behaviors in Depressive Patients: The Korea National Health and Nutrition Examination Survey 2014

Poster Presenter: Hyungsook Hong
Co-Author: Tae-Suk Kim, M.D.

SUMMARY:

Background: The purpose of this study was to investigate the effect of depression on health-seeking behaviors through the large epidemiological study data of the Korean National Health and Nutrition Examination (KNHANES). **Methods:** The 6th Korea National Health and Nutrition Examination Survey (KNHANES VI, 2014), which is a large-scale national survey, was addressed in this study. Patients health questionnaire-9 (PHQ-9) was used to assess the depressive states of the participants. Specialized self-reported questionnaires which include the question about health-seeking behaviors were also performed. To examine the relationship between depression and health-seeking behaviors, a complex sample logistic regression models with controlling for covariates were used. **Results:** There was a significant association between decreased health-seeking behaviors and depression in adults (OR=3.09, 95% CI [2.41, 3.96]). We also found that the association is more strong in men (OR=3.35, 95% CI [2.20, 5.10]) rather than women (OR=2.99, 95% CI [2.28, 3.94]).) Among age groups, young-aged adults (19–44 years old) showed the highest odds

(OR=3.25, 95% CI=2.27–4.90), which suggested that depressive patients had lower health-seeking behaviors than control groups. **Conclusion:** Our findings support an idea that there are significant association between the health-seeking behaviors and depression in Korean population. These results suggest that individuals with decreased health-seeking behaviors would be evaluated with their depressive symptoms.

Poster Session 2

No. 1

Transcranial Direct Current Stimulation and Cocaine Addiction: A Double-Blind Placebo-Controlled Study

Poster Presenter: Giovanni Martinotti, M.D.

SUMMARY:

Introduction: The field of neuromodulation encompasses a wide spectrum of interventional technologies that modify the pathological activity within the nervous system to achieve a therapeutic effect. Therapy, including transcranial direct current stimulation, has shown promising results across a range of neurological and neuropsychiatric disorders. Addictive disorders are a major public health concern, associated with high relapse rates, significant disability and substantial mortality. Unfortunately, current interventions are only modestly effective. Preclinical studies as well as human neuroimaging studies have provided strong evidence that the observable behaviours that characterize the addiction phenotype, such as compulsive drug consumption, impaired self-control, and behavioural inflexibility, reflect underlying dysregulation and malfunction in specific neural circuits. These developments have been accompanied by advances in neuromodulation interventions, both invasive as deep brain stimulation, and non-invasive such as repetitive transcranial magnetic stimulation and transcranial direct current stimulation (TDSC). Among the brain stimulation techniques, TDCS appear to be really promising in the area of addiction psychiatry. In this study we aimed to evaluate the efficacy of a TDCS treatment in Cocaine Use Disorder. Methods: a double-blind, placebo control design was applied to evaluate 30 seeking treatment cocaine addicts, compared with 30 normal controls. Different scales were applied: the Cocaine Craving Questionnaire, the Hamilton depression Rating Scale, the Hamilton Anxiety Rating Scale, the Barrat Impulsiveness scale. Results: after two weeks of treatment TDCS treatment showed to be efficacious in both craving reduction and improvements of psychiatric symptoms. No adverse reaction was described. Conclusion: TDCS treatment appear to be a promising treatment for cocaine addicts. Further studies are required for larger sample and with longer follow-up design.

No. 2

WITHDRAWN

No. 3

Psychiatric Inpatients With Comorbid Cannabis and Cocaine Use Disorders: Impact on Impulsivity

Poster Presenter: Gregory Larimer, M.D.

Co-Authors: Shweta Kapoor, Dean Joseph Atkinson, M.D., Crispa Josephine Aeschbach Jachmann, M.D., Teresa Pigott, Melissa K. Allen, D.O.

SUMMARY:

Background: Comorbid Cannabis and Cocaine Use Disorders are particularly prevalent in psychiatric inpatients. Previous studies have linked mood, psychotic, and/or substance use disorders with significantly elevated levels of impulsiveness. The Barratt Impulsiveness Scale (BIS-11) is a commonly administered self-report measure for assessing impulsiveness. Elevated BIS-11 scores have not only been reported to be elevated in Cocaine Use, but BIS-11 scores were predictive of the level of cocaine use in one report. However, there is limited data concerning impulsivity in Cannabis Users. The present study was designed to investigate whether impulsivity is differentially associated with comorbid Cannabis and Cocaine Use Disorder. **Methods:** 184 adult patients with a primary diagnosis of Depressive Disorder, Bipolar Related Disorder, Schizophrenia Spectrum Disorder, or Substance-Related Disorder admitted to the same psychiatric unit at an inner city academic hospital in Houston between 1/13 and 7/14 were assessed using the National Institute on Drug Abuse (NIDA) Modified ASSIST-2 and the BIS-11; Urine Drug Screen (UDS) results were also collected at admission. The BIS-11 measures trait impulsivity in three domains: attention, motor, and

non-planning subscales. Linear hierarchical regression was used to examine the association of the use and risk of use of Cannabis and Cocaine, respectively with the BIS total score and the BIS Subscales (second order). NIDA risk scores for Cannabis and Cocaine, respectively, were used as continuous variables. **Results:** Of the 184 psychiatric inpatients, 55.4% were males with mean age of 35.14 years and was comprised of 50% Non-Hispanic whites, 35.9% Blacks, and @ 10% Hispanics. On the NIDA Modified ASSIST, 60.3% (111) of the inpatients were positive for Cannabis and 39.7% for Cocaine (73). On the UDS, 42% were positive for Cannabis and 19% for Cocaine. Linear hierarchical regression revealed that the β coefficients for Attentional (β=-.293, t=2.135, p<0.034) and Non-planning impulsiveness (β=0.397, t=3.208, p=0.002) scales were significantly correlated with risk of Cannabis Use, whereas only the non-planning BIS-11 Subscale was significantly correlated with risk of Cocaine Use (β=0.435, t=3.427, p=0.001). Additionally, 42% patients were positive for Cannabis and 19% were positive for cocaine on admission per UDS results. **Conclusion:** In this study, Total BIS-11 Score and 2 out of 3 BIS-11 impulsivity trait subscale scores were significantly associated with risk of Cannabis use. The findings suggest that there may be an important link between impulsivity, especially Attentional and Non-planning impulsivity, and Cannabis Use Disorder. In comparison, Non-planning impulsivity was the only subscale significantly associated with risk of Cocaine use, suggesting varying impulsivity profiles in patients with Cannabis Use Disorder in comparison to Cocaine Use Disorder.

No. 4

Self Esteem, Quality of Life and Psychiatric Disturbances in HIV-Positive Drug Dependents Admitted at a Tertiary Care Hospital in Pakistan

Poster Presenter: Imtiaz Ahmad, M.D.

SUMMARY:

Pakistan has 0.1 % prevalence of HIV in adult population but some special segments are associated with threatening prevalence like intravenous drug users (IDU's) where HIV prevails in 21 % of the population. This special segment faces the stigma and discrimination of labels, HIV and Drug dependence. These may contribute to their self esteem, quality of life and mental health deterioration. Current study aims to investigate these variables in HIV positive drug dependents. Objectives: To examine the self esteem, Quality of Life and psychiatric disturbances in HIV positive Drug dependents Design: Cross Sectional Place & Duration: The study was conducted in Model Drug Abuse & Treatment Center DHQ Hospital, Faisalabad, Pakistan from February 2016 to January 2017. Method: 114 HIV drug dependents were recruited for the study through consecutive sampling, Demographic variable Performa, Rosenberg Self Esteem Scale, WHO QOL BREF and Self Report Questionnaire -24 were administered. Results: Most of the HIV drug dependents were between 20-35 years of age, had no or nominal education, were unemployed or laborers and lived in their own houses. About half of the sample lived in urban areas, was married and started abusing drugs on peer pressure. 82.5 % of HIV drug dependents scored lower than the cut off value on Rosenberg self esteem scale and 96% of the total scored more than the cut off set for screening psychiatric disturbances. One sample t-test confirmed both finding that majority of sample had low self esteem and high psychiatric symptomatology demanding psychiatric interview, t(113) = -9.250, p = 0.00 and t(113) = 23.1, p = 0.00 respectively. All 04 domains of QOL moderately and positively correlated with each other. Calculation of the threat they carry for the rest of the society was examined in terms of their practices concerning modes of spread. The data showed that 100 out of 114 used intravenous needles and 63 among these shared these needles with others while 46 reused the syringes. 93 were sexually active and among these 57 have experienced pre marital and extra marital sex, while 35 of them had multiple partners. 46 HIV positive drug users were not fashioned to the protective measures of sex, while 47 of total sexually active have married sexual partners who may transfer the virus to the off springs. Conclusion: HIV positive drug abusers belonged to special population segments like young males, uneducated daily wagers or unemployed. Most of the HIV positive drug abusers had low self esteem and high psychiatric disturbances. Their current practices carry high risk for the spread of the virus. Keywords: Self Esteem, QOL, Psychiatric Disturbances, Risk of HIV spread.

No. 5

Comparison of Residents' Attitudes and Knowledge About Opioid Use Disorder: A Cross-Sectional Study

Poster Presenter: Isabella Morton
Co-Authors: Danae Nicole DiRocco, M.D., Jamie Spitzer, M.D.

SUMMARY:

Background: The United Sates is experiencing an opioid epidemic and confronting it requires advances in medical education and care delivery. Opioid use disorder (OUD) is a disease, but too often, even among medical professionals, it is treated as a character flaw, leading to under-diagnosis and treatment. This study was designed to determine attitudes toward and knowledge about OUD among incoming residents in four training programs, as a baseline for tracking how their attitudes and knowledge change over the duration of training. Methods: A 33-item survey was developed to evaluate incoming residents' knowledge and attitudes toward OUD, including the training they received about OUD in medical school and their state of readiness to manage withdrawal and prescribe treatment. Participants were residents in emergency medicine (EM), internal medicine (IM), obstetrics & gynecology (OB), and psychiatry (Psy). The survey was distributed to interns in their first month of training; participation was voluntary. A five-option Likert scale was used to evaluate attitudes. A score was calculated for each participant based on correct answers to 13 knowledge questions. Results: These are preliminary results from the first year of the 4-year survey. All eligible Psy and OB residents, 88% of the EM residents, and 50% of the IM residents completed the survey; the overall response rate was 75% (52/69). For the aggregated knowledge score, Psy residents had the highest average of 75%, followed by IM, OB, and EM, with scores of 72.8%, 71.4%, and 59.9%, respectively. Across specialties, 38% reported receiving no formal training on OUD in medical school. Only 15.4% reported feeling knowledgeable about OUD treatment and resources in their community. Nearly half of all participants and 71% of EM residents reported feeling unprepared to diagnose OUD. The majority (55.8%) of all residents felt prepared to diagnose opioid withdrawal, and 30.8% felt prepared to treat it. 11.5% of respondents felt prepared to continue outpatient treatment and none strongly agreed that they were prepared to continue outpatient treatment. Only 13.5% of residents agreed that they felt prepared to initiate buprenorphine treatment. An impressive 84% of all residents desired more formal training in residency on the treatment of OUD. Discussion: Formal education on OUD and treatment is lacking for incoming residents across specialties. Our results demonstrate that incoming residents do not have adequate experience or knowledge to address the burgeoning opioid epidemic appropriately and that the vast majority of them want more formal training on OUD during residency. Our results point to the need to develop innovations in education so that physicians in training have access to the knowledge and tools necessary to confront the opioid epidemic.

No. 6

Comparison of Risk Factors Between Smartphone Addiction Group and Internet Addiction Group

Poster Presenter: Jiwook Kang

SUMMARY:

INTRODUCTION Smartphone addiction and internet addiction is an interesting concern today. The aim of this study is to assess the risk factors associated with smartphone addiction and internet addiction, and compared the significant risk factors between smartphone addiction and internet addiction. METHODS Chungnam National medical college students (N = 92) in South Korea completed the Smartphone Addiction Scale, the Young's Internet Addiction Test, the Body Dysmorphic Disorder Examination-Self Report, Korean Inventory of Interpersonal Problems, Depression Anxiety Stress Scale-21, NEO Five-Factor Inventory, Pittsburgh Sleep Quality Index, Morningness-Eveningness Questionarrie, and Symptom Checklist-90-Revised. RESULTS The risk factors for smartphone addiction were internet use, anxiety, depression, high BDDE-SR, eveningness. In contrast, the risk factors for Internet addiction were male gender, smartphone use, anxiety. These differences may result from unique features of smartphones, such as high availability and various purposes of use that include a tool for interpersonal relationships. CONCLUSIONS Our results will help clinicians in distinguishing

between risk factors for smartphone addicton and Internet addiction. Also these risk factors will be helpful for prevention and treatment of smartphone addiction and internet addiction.

No. 7

A Clinical Case of Synthetic Cannabinoid (K2)-Induced Second-Degree AV Block

Poster Presenter: Junyong Jia, M.B.B.S.

SUMMARY:

Synthetic Cannabinoid, K2/Spice, has gained great popularity in young population, due to ITS easy accessibility and mild euphoria effects in the past decade. The most common side effects of K2 include euphoria, anxiety, impaired judgement, nausea and vomiting. Psychosis and cardiovascular side effects of tachycardia, ST/T changes, AFib and PVC have also been reported in literature. We reported a case of transient and reversible 2nd degree AV block after the use of K2 in a 30-year old African American female. PubMed searching resulted in no report of such side effect of K2. However, Marijuana was reported to cause 2nd degree AV block in the past. Therefore, this is the first such cardiovascular side effect reported for K2. We also discussed the possible underlying mechanisms of K2 on cardiovascular system and the significant clinical relevance of this newly reported adverse effect of K2.

No. 8

Measures of Quality of Life Among Opioid-Dependent Individuals in Taiwan: A Comparison Between EQ-5D and WHOQOL-BREF

Poster Presenter: Kai-Tang Chang

SUMMARY:

Background: Brief version of the World Health Organization's Quality of Life (WHOQOL-BREF) and EuroQol-5 Dimension (EQ-5D) are tools widely used for measuring quality of life (QoL). This study aimed to evaluate the measurement properties and the determinants of these two questionnaires in opioid-dependent individuals in Taiwan. Methods: Two hundred participants diagnosed with opioid dependence were recruited from three addiction treatment units in Taiwan. All participants were measured with the EQ-5D, WHOQOL-BREF, opiate treatment index (OTI), and Self-Stigma Scale (SSS). We conducted the comparisons using Pearson correlation and linear regression models. Results: The participants had a mean age of 45.1 years [standard deviation (SD) =7.6 years]. The mean score of health visual analogue scale (VAS) of EQ-5D was 65.17 (SD=15.52) and the utility was 0.89 (SD=1.43). The mean scores of physical health, psychological health, social relationships, and environment domain of WHOQOL-BREF were 13.49 (SD=2.74), 11.84 (SD=2.92), 12.56 (SD=2.74), and 13.33 (SD=2.60), respectively. Pearson correlation coefficient between utility of EQ-5D and four domains of WHOQOL-BREF showed a medium to high correlation (ranged from 0.368 to 0.616), with the highest correlation between physical health of WHOQOL-BREF and utility of EQ-5D. In linear regression model, the psychological adjustment of OTI had the highest influence on EQ-5D (explained variance of 42.6%) and the physical health of WHOQOL-BREF (46.1%). Psychological adjustment also showed an explained variance of 28.4%-38.2% for the other three domains of WHOQOL-BREF. Receiving opioid agonist treatment was a predictor for better EQ-5D and psychological health of WHOQOL-BREF. Stigma (as assessed by SSS) also had a negative impact on both EQ-5D and social QoL. On the other hand, opioid users with a full-time job or a higher monthly income had better scores in EQ-5D and physical, psychological and environment domains of WHOQOL-BREF. Last but not least, sexual life was also a good predictor for both physical and social QoL. Conclusion: The correlations between EQ-5D and WHOQOL-BREF showed the consistency of both instruments in measuring QoL among opioid-dependent individuals. Mental health seemed to have the highest effect on QoL. Furthermore, stigma had a detrimental effect on QoL among opioid users in Taiwan. Receiving treatment, employment, and sexual life were good predictors for a better QoL. Based on the results, an integrated service model may lead to a better outcome. This research was supported by grants from the Ministry of Health and Welfare, Executive Yuen, Taiwan.

No. 9

Alcohol Detoxification Complicated by Previous Withdrawal Seizures and Psychogenic Nonepileptic Seizures

Poster Presenter: Lisa Nicole Oliveri, M.D.
Co-Author: Stephen A. McLeod-Bryant, M.D.

SUMMARY:
Mr. J is a 36-year-old male, with a history of posttraumatic stress disorder, unspecified depressive disorder, opioid use disorder, sedative-hypnotic use disorder, and alcohol use disorder complicated by withdrawal seizures despite being on a benzodiazepine taper. On admission for exacerbation of depression, the patient reported using clonazepam three times daily and consuming 750 mL of liquor daily, with his last use of both substances the previous evening. Mr. J was started on a chlordiazepoxide taper due to his history of withdrawal seizures and recent cessation of heavy alcohol use. Approximately 24 hours after his last use of alcohol, he was found to be in withdrawal with a witnessed seizure. He was transferred to the medical emergency room, where he experienced two further generalized tonic-clonic seizures and was subsequently admitted to Medicine. During admission, he continued to exhibit seizure-like activity, despite the chlordiazepoxide. Neuroimaging and electroencephalogram were completed, and Neurology recommended no further intervention as his presentation was consistent with psychogenic nonepileptic seizures (PNES). He was ultimately medically cleared and tapered off chlordiazepoxide. With the risk of mortality associated with alcohol withdrawal, it is critical to obtain a thorough history to direct patient management. In this poster, we discuss the challenges of determining appropriate detoxification strategies in a patient with prior withdrawal seizures and PNES.

No. 10

Impact of the Opioid Epidemic on the Provision of Substance Use Treatment for Patients Admitted to an Academic Psychiatric Hospital in the Midwest

Poster Presenter: Matthew P. Arrowsmith, M.D.
Co-Authors: Julie A. Niedermier, M.D., Danielle Steelesmith

SUMMARY:
Background: The opioid epidemic is worsening, with overdose deaths tripling between 1999 and 2014.The greatest increase in heroin-related deaths occurred in the Midwest. Comorbidity is common. Among the 9.8 million adults nationwide aged 18 and older with serious mental illness, 23.8% had a co-occurring substance use disorder. 7.2% of adults with any mood or anxiety disorder also met criteria for opioid use disorder, compared to 1.42% of the general population. The authors examined the impact of the epidemic on the likelihood of substance use treatment in the adult population of seriously mental ill patients admitted for psychiatric stabilization at an academic medical center in the Midwest. The goal was to determine if there were trends in the admitted population indicative of comorbid opioid use disorder necessitating initiation or continuation of treatment while hospitalized. Methods: The medication-assisted treatments, buprenorphine, methadone, and naltrexone may be utilized to reduce risk of relapse from opioid use disorders. In the population of adults admitted for psychiatric stabilization, patients may be adjunctively receiving any of these medications or they may be candidates for a trial of buprenorphine or naltrexone, depending on various factors. At this center, methadone cannot be initiated, although maintenance treatment can be provided. The authors reviewed admission data and determined the number and proportion of adult patients prescribed naltrexone, methadone, or buprenorphine while psychiatrically hospitalized for severe mental illness from fiscal year 2015 to fiscal year 2017. It was hypothesized that an increase in the number and percentage of patients receiving buprenorphine, methadone, or naltrexone while admitted for psychiatric stabilization had occurred over the last two years. Results: With regards to buprenorphine, the proportion of patients prescribed buprenorphine while psychiatrically hospitalized in fiscal year 2015 was 1.84 %. In fiscal year 2017, this proportion had increased to 2.80 %, representing an increase of 52.17 % over two years. With regards to naltrexone, the proportion of patients prescribed naltrexone in fiscal year 2015 was 1.07 %. In fiscal year 2017, the percentage of patients prescribed naltrexone increased to 1.80 %, representing an increase of 68.22 % over two years. The proportion of patients receiving methadone treatment over this same time interval was relatively constant, at <0.5%. Conclusions: During the last two years there has been a significant increase in the overall number and percentage of patients receiving

treatment for comorbid substance use disorders with buprenorphine and naltrexone while hospitalized at a Midwestern academic medical center in the heart of the opioid epidemic. This suggests that ongoing vigilance and attention to the assessment and treatment of substance use disorders in severely mentally ill patients presenting in psychiatric crisis is warranted

No. 11

Kratom Craze, Schizophrenic Ways, or Delirium Haze?

Poster Presenter: Matthew Wayne Sharp, D.O.
Co-Author: Kimberlee V. Wilson, D.O.

SUMMARY:

Mr. W. is a 32-year-old Caucasian male with a psychiatric history of benzodiazepine use disorder and major depressive disorder who presented with paranoia, auditory hallucinations, psychomotor agitation, disorganized behavior, incoherent speech and multiple bruises located on the patients, arms, legs, torso, abdomen and face. The patient had recently separated from his girlfriend, who lived in a different country, and would aimlessly look for her from his home. The patient was a limited historian and his history required collateral from family who reported that his symptoms have been worsening over the past 10 years but 7 months prior the patient had a seizure and "was never the same". He was admitted to an inpatient psychiatric hospital. On admission the patient reported taking eight, triple zero sized capsules of kratom a day for the past 6 years. He reported taking this medication for its effects similar to opiates. We considered a differential of kratom-induced psychosis from intoxication/withdrawal vs. delirium vs. sleep deprivation vs. first break Schizophrenia. Being that his symptoms may be less severe if sedated and that kratom is a legal, herbal supplement widely available across the United States of America, this led to concern that the patient may be masking his signs and symptoms of undiagnosed schizophrenia with kratom. A thorough history gathering including a discussion with family about herbal supplements can help elucidate complications of a patient's psychiatric condition. In this poster, we discuss the challenges and importance of identifying patients using kratom as well as other legal synthetic highs and its effect on the presentation of psychotic disorders.

No. 12

""Inexplicable Symptoms of Psychosis": A Case Study on Flakka Iinduced Psychosis "

Poster Presenter: Bhavneet Gujral, M.D.
Co-Authors: Lovejit Kaur, M.D., Michael T. Guppenberger, M.D.

SUMMARY:

Flakka also known as "gravel" is alpha-Pyrrolidinopentiophenone (alpha-PVP) which is a synthetic stimulant of the cathinone class; the latest in a series of synthetic drugs that have become popular in the United States. Included on this list are Ecstasy, Dream, K2 and Bath Salts. People use Flakka for its potential euphoric high but it is also known to easily escalate into frightening delusions, paranoia, psychosis, extreme agitation, and altered mental status. We are describing the case of a 45 year old male who reported taking Flakka at a concert and developed symptoms of paranoia, aggression and poor sleep requiring a prolonged hospital course of 43 days including admissions to medicine and psychiatry. On initial presentation, the patient was intoxicated and a poor historian. His family reported daily alcohol use, and his urine toxicology was positive for marijuana and benzodiazepines. Flakka was not identified on the urine toxicology and etiology of his behavior was unclear for the longest period of his hospital course. He was started on Risperdal 0.5 mg every morning, 1.5 mg every night, with Ativan and Clonidine as needed. He was placed on CIWA protocol but continued to manifest ongoing symptoms of withdrawal for several days, therefore a barbiturate tolerance test was completed (up to 700 mg without nystagmus or significant sedation) and the patient was placed on a phenobarbital taper. By the 10th day of psychiatric admission, the patient's hospital course was further complicated which required intensive care unit admission (ICU) for ongoing delirium possibly due to withdrawal, elevated BUN/Cr and hypernatremia. He later developed hyperchloremia, hematuria, rhabdomyolysis, transaminitis, worsening hypoxia and aspiration pneumonia which required oxygen support and intubation along with intravenous antibiotics. He continued to be aggressive in the ICU

which required restraints, propofol and precedex drip, in addition to Haldol and Ativan. The patient started to show gradual improvement in his symptoms after one month and at that time was started on Geodon 20 mg twice a day with meals and Klonopin 5 mg every 4 hours for agitation. The patient demonstrated improvement on this regimen and was successfully discharged on the 43rd day of admission. Flakka acts as a norepinephrine-dopamine reuptake inhibitor with IC50 values of 14.2 and 12.8 nM, respectively, similar to its methylenedioxy derivative MDPV found in bath salts which potentially leads to psychosis. The presence of inexplicable psychotic symptoms which have a prolonged course should be investigated for possible differentials such as substance use. Physicians should be aware of the difficulty detecting synthetic cannabinoids using regular urine drug screens, and their association with psychosis.

No. 13

The Effectiveness of Gabapentin in Reducing Cravings and Withdrawal in Alcohol Dependence: A Meta-Analysis

Poster Presenter: Saeed Ahmed, M.D.

SUMMARY:

Background: Although research has examined the efficacy of gabapentin in the treatment of alcohol withdrawal and cravings, the findings were not conclusive. To this end, the current meta-analysis synthesized previous findings and examined the overall effect of gabapentin on alcohol withdrawal and craving. Methods: Ten studies met the inclusion criteria for the current study. We conducted three sets of meta-analyses depending on the research design and specific data reported in a given study. These meta-analyses were examination of outcomes from (a) single group pretest-posttest changes, (b) posttest differences between independent groups, and (c) differences in pretest-posttest change scores between independent groups. Standardized mean difference (SMD) scores for each study were computed and subsequently meta-analyzed in the relevant design-specific meta-analysis, using random effects models. Results: Statistically significant effect sizes were found for craving and withdrawal in the meta-analysis of single-group pretest-posttest outcome changes. However, these effects were associated with a high level of heterogeneity. By contrast, the meta-analyses of posttest differences between independent groups as well as the meta-analysis of differences in pretest-posttest change scores between independent groups did not yield significant effect sizes. Conclusion: Our results suggest that Gabapentin treatment for alcohol craving and withdrawal appeared to be at least moderately effective. However, given the limited number of well-designed studies, these findings require further research, using primary studies that use more rigorous methodology. Discussion: The effective use of the FDA-approved agents in the management of alcohol use disorder include medical and psychiatric comorbidities, poor medication adherence, and problems with tolerability. As the body of research on alternatives to these agents continues to grow, we sought to improve the understanding of gabapentin's strategic role in the management of alcohol dependence and withdrawal. Gabapentin is not hepatically metabolized, making it potentially preferable to current FDA-approved agents, especially in this target population with a high prevalence of hepatic insufficiency. Unlike acamprosate, gabapentin can also be used for patients with the renal function below 20 mg/dL. Because of its safety profile with fewer side effects, lack of interactions with other medications added property of sleep improvement for individuals with alcohol use disorders, and the fact that it is generally well-tolerated makes gabapentin a promising agent in AUD treatment.

No. 14

Adding Psychotherapy to the Naltrexone Treatment of Alcohol Use Disorders: A Meta-Analysis

Poster Presenter: Saeed Ahmed, M.D.

SUMMARY:

Background: The added impact of psychotherapy with naltrexone treatment in alcohol use disorders (AUD) has not been adequately studied. In addition to examining the effect of naltrexone on various clinical outcomes in AUD, the current meta-analysis examined the hypothesis that psychotherapy is a significant moderator that influences AUD-related outcomes and that naltrexone combined with psychotherapy is associated with significantly better AUD-related outcomes than naltrexone alone.

Methods: A total of 28 studies (Nnaltrexone=1610; Nplacebo=1613) were included. For each of the studied outcomes, random effects model meta-analyses of all studies were carried out separately for all studies, as well as a subgroup analysis of studies with and without psychotherapy. Subsequently, the random effects model pooled estimates from studies with and without psychotherapy were compared using a Wald test. A mixed-effect model, incorporating psychotherapy as a moderator, was used to examine the impact of psychotherapy on treatment outcomes. Results: The random effects model meta-analyses revealed that naltrexone had a significant treatment effect on abstinence (OR = .30 CI=[.06, .56]) relapse (OR = -.43 CI=[-.59, -.28]) and Gamma-Glutamyl Transferase levels (SMD = -.16 CI=[-.29, -.04]), but not cravings (SMD = -.11 CI=[-.31, .10]) . The pooled estimates for studies with and without psychotherapy were not significantly different for any of the studied outcomes. Psychotherapy was not a significant moderator in the mixed effects models for any of the studied outcomes. Conclusions: Naltrexone treatment is efficacious in reducing alcohol consumption, but not reducing cravings. Adding psychotherapy on top of naltrexone did not result in any significant additional benefit for AUD patients. Discussion: The current study examined the hypotheses that naltrexone is efficacious in treating AUDs and that psychotherapy combined with naltrexone significantly augments AUD-related treatment outcomes. In relation to the former, our results have generally indicated that naltrexone had been efficacious in treating AUDs. Specifically, the pool estimates indicated significant treatment effects in improving self-reported alcohol consumption outcomes such as abstinence, relapse, and objectively measured GGT, which is a widely used and a highly specific biomarker for excessive alcohol consumption. However, there was not a significant treatment effect on cravings. It is worthwhile to note that the current study is the first to document the meta-analytic findings of naltrexone on GGT and alcohol-related cravings. In relation to the second hypothesis, adding psychotherapy to the naltrexone treatment of AUDs did not significantly augment treatment outcomes; the combined treatment of psychotherapy and naltrexone was not any better than naltrexone alone.

No. 15

Chronic Alcoholism, Traumatic Brain Injuries, and the Development of Korsakoff's Psychosis: A Case Report

Poster Presenter: Shirish Patel, M.D.
Lead Author: Ivanshu Navinprakash Jain, M.D.
Co-Authors: Ambreen Rahman, M.D., Charles Huston Dukes, M.D., Britta Ostermeyer, M.D.

SUMMARY:
Mrs. F., a 58-year-old Caucasian female with a past psychiatric history of alcohol use disorder and traumatic brain injury, presents to the emergency department for higher level of care for altered mental status, agitation, and significantly elevated levels of ammonia following a two week stay at a residential substance abuse treatment facility for visual hallucinations and paranoia with a resultant diagnosis of schizophrenia. The patient was not cooperative while being interviewed and reported seeing holograms of people that were coming after her. Throughout the interview, her eyes were closed, spoke slowly, appeared drowsy, and could not provide much history. The patient's boyfriend stated that she routinely drank a six-pack of beer twice a week. She was admitted to the inpatient medicine service for alcohol withdrawal. The medical team considered the differential diagnosis of alcohol withdrawal delirium, neuroleptic malignant syndrome, and acute Parkinsonism. The patient's overall condition improved after starting a Clinical Institute Withdrawal Assessment for Alcohol (CIWA) protocol and chlordiazepoxide; however, she continued to have delusional and paranoid thoughts. Neuropsychiatric testing revealed significant impairments in the patient's working memory, cognition, and performance of activities of daily living. Further testing revealed visuospatial agnosia out of proportion typically associated with a right parietal dysfunction. Imaging studies found severe cerebral volume loss - disproportionate to age, atrophic mammillary bodies, and mineralization within the basal ganglia; classic for all of the typical findings in either chronic alcohol or toluene abuse, suggestive of Korsakoff's syndrome. Together with her persistent delusions and paranoid behavior a

diagnosis of Korsakoff's psychosis was established. The patient's longstanding history of alcohol abuse, traumatic brain injury and poor activities of daily living functioning gave rise to concern about the suboptimal management of her residual symptoms of her traumatic brain injury and poor diet that could have worsened the effects of alcoholism on her mood and cognition; possibly overlooking differential diagnoses such as Pellagra Encephalopathy and early onset Parkinson's disease complicated by chronic alcoholism. In this poster, we discuss the challenges of differentiating alcohol-related psychotic symptom etiology during the treatment of alcohol withdrawal in patients with previous traumatic brain injuries.

No. 16

Case Report of Takotsubo Cardiomyopathy in a Psychiatric Patient With Longstanding Rheumatoid Arthritis

Poster Presenter: Ivanshu Navinprakash Jain, M.D.
Co-Authors: Shirish Patel, M.D., Ambreen Rahman, M.D., Charles Huston Dukes, M.D., Britta Ostermeyer, M.D.

SUMMARY:
A 64-year-old Caucasian female with a past psychiatric history of bipolar disorder, depression, hypothyroidism, rheumatoid arthritis and cardiac arrhythmias was taken to a local hospital after her daughter found her at home in a disheveled, delirious and anxious state and had not slept in two days. There she was given IV fluid resuscitation for hypotension and hypokalemia. She was admitted to the inpatient medicine service. Her daughter reported that her mother had been living alone for quite some time without any difficulty; however, her mood and ability to perform her activities of daily living had diminished over the past year, shortly after the passing of her husband. The daughter states that she suspects that her mother had been taking increasing amounts of analgesics after recent surgery for closed angle glaucoma. Few weeks prior to her presentation, the daughter reported that her mother became completely withdrawn, stopped eating, drinking, and could not function. Medication history revealed that she was tried on multiple antidepressants and antipsychotics for her symptoms of depression and bipolar disorder. She had also been taking daily levothyroxine for hypothyroidism and receiving once-weekly injections of a tumor necrosis factor (TNF) alpha inhibitor for the treatment of rheumatoid arthritis. Electrocardiography (ECG) test results showed ST elevation with multiple premature ventricular contractions (PVCs). Transthoracic Echocardiography (TTE) results showed findings consistent with markedly reduced left ventricular systolic function with extensive akinesis of the mid- to apical cavity with relatively preserved basal contractility. The ECG and TTE findings together with the patient's recent history of severe emotional stress were consistent with Takotsubo Cardiomyopathy (TCM): a reversible neurogenic stress-induced cardiomyopathy also known as "Broken-heart Syndrome." This led to the concern of the patient's ongoing medical treatments for rheumatoid arthritis and hypothyroidism affecting her mood and ability to function independently while being severely emotionally distressed over the loss of her husband. In this poster, we discuss the causal links between the long-term treatment of mood disorders and multiple comorbid medical conditions and how they could predispose a patient towards presenting with psychosomatic symptoms.

No. 17

Medication Noncompliance and Adverse Drug Events: A Case Report on Neuroleptic Malignant Syndrome

Poster Presenter: Ambreen Rahman, M.D.
Co-Authors: Shirish Patel, M.D., Ivanshu Navinprakash Jain, M.D., Charles Huston Dukes, M.D., Britta Ostermeyer, M.D.

SUMMARY:
Ms. N., a 57-year-old Caucasian female with a past psychiatric history of Bipolar disorder, Parkinsonism and substance use disorder, presents to the Emergency Department after she was found at her home by her daughter in a confused and lethargic state. Her family reported similar incidents almost every other month and were thought to be related to poor medication compliance, stating that she does not take her medications as prescribed, often forgetting that she took some of her medications, and at times taking more. The patient's family further states that she never runs out of them,

possibly taking them all at once rather than throughout the day. During evaluation she was lethargic, somnolent and non-response; her family reported that she had not gotten out of her bed 'immobile and motionless' for 2-3 days before her presentation. She was admitted to the intensive care unit (ICU) for the management of rhabdomyolysis, respiratory distress, and acute renal injury. The medical team considered the differential diagnosis of Neuroleptic Malignant Syndrome (NMS), Serotonin Syndrome, Malignant Catatonia and medication toxicity. She was started on a regimen of lorazepam, haloperidol and dexmedetomidine for agitation while in the ICU, where her symptoms soon improved. This led to the concern of possible withdrawal of L-Dopa and concurrent inadvertent mood stabilizer overdose given the patient's history of poor medication compliance and purposely taking more than the recommended doses at times. NMS is a life-threatening complication, patients with psychiatric histories presenting with a cluster of autonomic dysfunction, motor and behavioral symptoms and abnormal laboratory results need to be treated with careful consideration of their medication regimen and compliance. A full medical and neuropsychiatric workup and history gathering can help reveal sources of difficulties in a patient's ability to be compliant with a medication regimen. Finding formulations and alternate routes of administration can help improve medication adherence. In this poster, we discuss the challenges of managing adverse drug events in a patient with a history of medication noncompliance, mental illness, and substance abuse disorder.

No. 18

Serotonin Syndrome, Sjogren's Syndrome, and the Impact of Pharmacogenomics: A Case Report

Poster Presenter: Shirish Patel, M.D.
Lead Author: Ambreen Rahman, M.D.
Co-Authors: Ivanshu Navinprakash Jain, M.D., Charles Huston Dukes, M.D.

SUMMARY:

A 55-year-old Caucasian female with a history of depression, anxiety, PTSD, migraines, Sjögren's syndrome, and Fibromyalgia presents to the psychiatric consult service with recent onset of anxiety and restlessness. The patient described this as a "fish-flopping sensation," which occurred on the second day of admission for an ongoing headache due to hydrocephalus versus normal pressure hydrocephalus in the neurosurgery department. She reported similar symptoms approximately ten years ago when she started taking Buspirone 5mg PO TID, which was then discontinued. Further chart review revealed that she had an extensive list of medication allergies or past reactions from medications including Allopurinol, Rosiglitazone, Exenatide, and most notably triptans, selective serotonin reuptake inhibitors (SSRIs), serotonin-norepinephrine reuptake inhibitors (SNRIs) and atypical antipsychotic medications. On examination, she showed muscle rigidity, hyperreflexia, spontaneous myoclonus, sweating, tremulous and flushed. Her blood pressure was 211/97mm Hg, a pulse rate of 95 beats per minute, a respiratory rate of 20 per minute, and a body temperature of 36.3°C. Her Holter monitoring occasionally showed sinus tachycardia. Diagnosis of Serotonin Syndrome was made, and venlafaxine and meperidine were held, and Diazepam was continued with fluid replacement. The patient's symptoms improved the next day, and she was discharged with recommendations for outpatient follow up with her Psychiatrist. Serotonergic agents are widely used as first-line choices in the treatment of patients with major depressive disorder (MDD). Drug metabolism is taken into account through consideration of genetic variations of the cytochrome P450 (CYP) enzymes and functional polymorphisms of the 5-HT2A gene can lead to alterations in 5-HT concentrations. A patient who is a poor metabolizer would require a lower antidepressant dose to avoid possible adverse drug effects, and may also be more likely to fail multiple antidepressant trials due to early or have severe adverse reactions. The patient's clinical presentation of headaches and hydrocephalus demonstrate a correlation with her extensive history of Sjogren's Syndrome and subacute symptoms of serotonin toxicity presenting as allergies and side effects to serotonergic agents before developing an acute episode of serotonin syndrome. For depressed patients with persistent symptoms, a thorough physical examination and medication review are important to detect signs of serotonin toxicity. In this poster, we discuss the importance of antidepressant medication monitoring

and pharmacogenomic testing during the treatment of mood disorders could help to diagnose serotonin toxicity in patients taking multiple medications.

No. 19

Exercise, Depression, and E-Health Monitoring

Poster Presenter: Shirish Patel, M.D.
Co-Authors: Andrew Hanna, Preyas Patel, Sally Abudiab, Ryan Jugdeo, Martin A. Katzman, M.D.

SUMMARY:
The benefits of incorporating physical activity to treat various chronic diseases such as obesity, dyslipidemia, and hypertension have been well documented; however, adherence to lifestyle and behavioral interventions continues to be problematic in clinical practice, especially for patients afflicted with depression. Various studies have shown that exercise has a substantial antidepressant effect on patients with depression. However, symptoms of depression such as fatigue and apathy can often hinder a patient from engaging in exercise. As such, addressing this lack of adherence and creating strategies for clinicians to use may help increase adherence rates following an exercise prescription. The use of activity trackers to monitor and quantify a patient's physical activity levels has been proposed as a method to address the lack of adherence in patients looking to undergo behavioral modification. Due to the popularity of wearable activity trackers such as the Fitbit, Jawbone, and Misfit, an opportunity may exist to integrate promising technology into lifestyle modification interventions for patients with depression. The impact of increasing physical activity in this population may combat many of the core symptoms of depression (mood, cognition, and fatigue), as well as reducing secondary symptoms associated with various chronic diseases. This scoping review will examine existing literature regarding the use of activity trackers as a method to increase exercise adherence rates following an exercise prescription for patients afflicted with depression.

No. 20

Assessing Depression Severity With a Self-Rated Versus Rater-Administered Instrument in Patients With Epilepsy

Poster Presenter: Christine Marie Collins, M.D.
Co-Authors: Erin Campbell Fulchiero, M.D., Martha Sajatovic, M.D., Shirin Jamal-Omidi

SUMMARY:
Rationale: Nearly 25% of patients with epilepsy have comorbid depressive disorders, which impact quality of life and frequently require concurrent treatment. In order to identify and manage depressive symptoms appropriately, clinicians need screening tools and other standardized instruments that can accurately identify those with clinically significant depression. This secondary analysis from 2 epilepsy self-management studies compared depression severity ratings and case identification using a "gold standard" self-rated depression screening tool and a "gold standard" rater-administered depression severity instrument. Methods: Data for this analysis were derived from pooled baseline and longitudinal data from 2 epilepsy self-management randomized controlled trials that tested a similar experimental intervention. Both studies assessed depression with the self-reported 9-item Patient Health Questionnaire (PHQ-9) and the rater-administered Montgomery Asberg Depression Rating Scale (MADRS). The PHQ-9 is widely used self-rated depression screening measure used in primary care settings and for population health surveillance, although it has been understudied as applied to people with epilepsy. The MADRS is a rater administered instrument widely used as a primary outcome measure in depression clinical trials. For this analysis, total depression severity scores and case identification using established thresholds for no/minimal, mild, moderate/moderately severe, and severe depression were assessed using both the PHQ-9 and MADRS. Results: The sample consisted of 164 adults with epilepsy, mean age 43.1 years (SD 12.2), with demographic and clinical variables between the 2 studies being generally similar. There were N= 107 women (64.8 %), N= 106 African-Americans (64.2%), and N=51 (30.9%) whites. Study participants had epilepsy for an average of 22.1(SD 15.5) years. Mean past 30-day seizure frequency at baseline was 3.1, SD 11.6. Baseline mean PHQ-9 was 10.8, SD 6.8 with 32 (19.6%) classified as minimally depressed, 47 (28.8%) classified as mildly depressed, 37 (22.7%) as moderately depressed, 27 (16.6%) as moderately severely depressed and 20 (12.3%) as

severely depressed. Baseline mean MADRS was 18.5, SD 11.3 with 30 (18.8%) classified as not depressed, 27 (16.9%) classified as mildly depressed, 92 (56.1 %) as moderately depressed, and 11 (6.9%) as severely depressed. The Pearson correlation between total PHQ-9 and total MADRS was =.843 ($p<0.01$), although case classification by depression severity varied somewhat between the two instruments. Conclusions: Standardized measures to screen and evaluate depression severity can help to identify cases and monitor treatment progress. The PHQ-9 and MADRS both perform well in assessing depression in patients with epilepsy, although administration burden is less with the PHQ-9 thus making it likely preferable for settings where time and epilepsy specialty resources are limited.

No. 21

Cerebellar Cognitive Affective Syndrome in Two Veterans: Case Studies and a Review of the Literature

Poster Presenter: Clare Gallego Bajamundi, D.O.

SUMMARY:

In 1998 Dr. J.D. Schmahmann published a paper in Brain in which he introduced the concept of "cerebellar cognitive affective syndrome (CCAS), also known as Schmahmann's syndrome. Cerebellar posterior lobe and vermal damage seem important in the development of this syndrome (1). Symptoms include executive deficits, disruption of visuospatial cognition, personality changes, and linguistic impairments. More recent research has expanded on this idea by evaluating how lesions in specific areas of the posterior cerebellum and vermis disrupt connections between the cerebellum, limbic and paralimbic system (2,4). A recent paper in Neuroimaging used voxel based lesion mapping and determined that CCAS was associated with lesions in lobules VII and VIII in the posterior cerebellum (3). This region has heavy connections with the medial rostral pons which connect to various association cortices of the cerebrum (5). This case study reviews the neuropathology and symptomatology of CCAS in the context of one patient with a large posterior cerebellar lesion and another with mega cisterna magna. It also adds to the limited literature on management strategies for this syndrome. Two veterans seen at our VAMC presented with various symptoms of PTSD, MDD, Bipolar Disorder and GAD but yet did not meet the full diagnostic criteria for any of these disorders. The first patient was initially being seen for PTSD as he was an army veteran in the Vietnam War. Starting in 1992 the patient began to feel more depressed, extremely anxious and was now experiencing auditory hallucinations. He received a new diagnosis of MDD with psychosis. However, over the years the patient developed mood lability, impulsivity and his cognition also continued to worsen. A 2008 CT of the head showed a cavernous malformation within the right posterior cerebellar hemisphere. An MRI in 2016 showed the lesion now had characteristics of a cavernoma. The second veteran had a diagnosis of schizophrenia from when he was in the Air Force in 1968. In 2001 the patient noticed a change in his symptoms. He was now endorsing 3-4 manic episodes a month and between these periods felt very depressed and anxious. In 2003 he began to have problems with anger control, worsening cognitive deficits and mild ataxia. A CT of the head was done in 2011 and mega cisterna magna was noted. Both patients have received continuous psychiatric management and therapy through the VA so we are able to provide a detailed course of treatment prior to and after recognition of this syndrome. Patients with cerebellar pathology can present with a collection of symptoms that do not discreetly fit one psychiatric diagnosis. These symptoms may even appear as just a worsening of preexisting symptoms. This can make diagnosis and treatment difficult. Through this review and case study we will highlight the most recent research in the neurobiology of this syndrome and provide insight into the long term management of these patients.

No. 22

Ketamine Infusion as Bridging Agent to Adjunctive Lithium Therapy in Treatment Resistant Depression: Case Report and Literature Review

Poster Presenter: Dimal D. Shah, M.D.
Co-Author: Raluca Stefanescu-Sturz, M.D.

SUMMARY:

Treatment resistant depression is considered after two trials of antidepressants from different pharmacological classes failed to produce a significant clinical improvement. For some patients,

SSRIs and bupropion as adjunctive therapy may not significantly improve depression. Ketamine, an NMDA receptor antagonist, may be used in treatment resistant depression. A 58 year old Caucasian male with PPHx of MDD and unspecified anxiety disorder was admitted to an acute psychiatric unit on a voluntary commitment for worsening depressed mood and increased anxiety over the past several weeks. For the past two weeks, he also had suicidal ideations with a plan to overdose on prescribed clonazepam. He detailed poor sleep quality and patterns, decreased appetite with significant weight loss, difficulty concentrating, and decreased energy levels. He experienced two episodes of palpitations, diaphoresis, shortness of breath and tremulous upper extremities within four days prior to admission. He was diagnosed with Major Depressive Disorder in his twenties and had adequate trials of sertraline and fluoxetine with marginal clinical improvement. Patient tried amitriptyline, aripiprazole, and brexpiprazole as adjunctive therapies with minimal improvement in symptoms. Brexpiprazole was stopped within days of initiation due to intolerable side effects. He is adherent to his current regimen of duloxetine 120 mg daily, bupropion ER 300 mg daily, buspirone 20 mg q12h, and clonazepam 1 mg q12h. Duloxetine dose was increased from 90 mg to 120 mg approximately two weeks prior to admission by his outpatient psychiatrist. Patient attends a structured outpatient program for several years. During this admission, he was diagnosed with treatment resistant depression and considered for ECT; however, patient had fixed, negative preconceived notions about such therapy. Patient's home medications were continued as inpatient, but buspirone frequency was increased to TID to manage his anxiety. Patient was also started on lithium for adjunctive therapy. While titrating lithium to a therapeutic dose, patient received two doses of ketamine infusion 48 hours apart at 0.5 mg/kg in 100 cc normal saline administered over one hour. Patient's suicidal ideations subsided within 24 hours of the first dose of ketamine; his depressed mood improved with each dose. At time of discharge, patient denied suicidal ideations and had dramatically improved mood and affect. His anxiety was better managed, as well. He was discharged on the same home medications with an increased frequency of buspirone and addition of lithium. His lithium level was within therapeutic range. Ketamine infusion should be considered as a bridging agent to decrease suicidal ideations and improve depressed mood in patients with treatment resistant depression as lithium is initiated and titrated to therapeutic levels.

No. 23

A Tale of Two Syndromes: A Case Report of Concurrent Catatonia and Delirium

Poster Presenter: Diana M. Robinson, M.D.
Co-Author: Donna T. Chen, M.D.

SUMMARY:
Delirium and catatonia share signs and symptoms yet rarely are diagnosed at the same time. Indeed, the DSM-V gives priority to delirium as a preemptive diagnosis. Both catatonia and delirium result in significant morbidity and mortality. However, given the divergent treatment recommendations for delirium and catatonia, consideration of their possible co-occurrence is critical to providing good patient care. We describe a patient with long-standing schizophrenia and multiple medical problems who developed delirium and catatonia and review the literature to provide guidance on 1) determining when a patient is suffering from catatonia, delirium, or both; 2) differentiating catatonia from neuroleptic malignant syndrome and other life-threatening conditions; and 3) considering treatment options in the face of these three diagnoses. Case Description: EP is a 76 year old man with a long history of schizophrenia and multiple medical problems, including heart failure who presented to the emergency department via EMS for evaluation of dyspnea. He was admitted to the cardiac intensive care unit for cardiogenic shock. Psychiatry was consulted for confusion. The initial evaluation was significant for schizophrenia stable on haloperidol with acute changes in depressed mood, perseveration, and a MMSE of 26. He was diagnosed with hypoactive delirium that was expected to improve with treatment of his acute medical problems. His longstanding psychotropic regimen of haloperidol 5mg QHS, mirtazapine 15mg QHS, and trazodone 100mg QHS was continued. The patient began to have episodes of mutism and negativism. By day 6, catatonia was suspected due to

a MMSE of 6 and a Busch Francis catatonia rating scale (BFCRS) score of 15 for predominant stereotypy, perseveration, and withdrawal. An EEG ruled out non-convulsive status epilepticus and was consistent with encephalopathy/delirium. The patient improved significantly after IV lorazepam challenge to a BFCRS 6. Based on the complicated nature of his medical and psychiatric comorbidities, electroconvulsive therapy was discussed, but the patient's medical condition was too tenuous. Over the next month the patient alternated between appearing more catatonic or delirious and required balancing doses of lorazepam and haloperidol to treat the catatonia, delirium, and schizophrenia. He was finally stabilized on lorazepam 1mg po TID and haloperidol 6mg QHS with a BFCRS of 0 and baseline mental status. He was discharged a month later to a skilled nursing facility for significant deconditioning. Discussion: This medically complicated patient's co-occurring catatonia and delirium in the context of well-controlled schizophrenia highlights many clinically important diagnostic and treatment dilemmas that will be addressed further in the discussion. The evidence for different treatments will be discussed including benzodiazepines, electroconvulsive therapy, amantadine, memantine, and topiramate.

No. 24

Neuropsychiatric Debut as a Presentation of Guillain-Barré Syndrome: An Atypical Clinical Case and Literature Review

Poster Presenter: Dinesh Sangroula, M.D.

SUMMARY:

Background: The classical clinical presentation of Guillain-Barré Syndrome (GBS) is that of progressive muscular weakness of the lower limbs extending proximally with hyporeflexia or areflexia after two to four weeks of an acute mild-moderate infections. Neuropsychological signs such as behavioral and mental status changes have been described in the literature as components of post-GBS syndrome. Nevertheless, none case has been identified so far which reported behavioral and central nervous system (CNS) symptoms of GBS before the onset of the motor symptoms. We are reporting a unique case of GBS which presented very atypically with psychiatric and behavioral symptoms prior to motor symtpoms and treated successfully with plasmapheresis and short term selective serotonin reuptake inhibitor (SSRI). Case Presentation: A 24-year-old, single, Guyanese male without any significant past medical and psychiatric history presented with a chief complaint of sudden onset, episodic, progressive, frontal-parietal headache, 8/10 in severity for 24 hours. Family members reported that one week prior, patient was acting differently at home; talking less than usual, looking sad, isolating himself, being easily frustrated and irritable, decreased energy or fatigue, and behavioral changes with violent outburst. All physical examination including neurological exam was normal at presentation including the laboratory results (except white blood cells count 17,000) and imaging including MRI. On psychiatric evaluation, patient was observed to be depressed and anxious with decreased psychomotor activity, slowed speech, lack of facial expression with markedly flat affect, and disconnect from his surroundings. Definitive diagnosis could not be made due non-specific depressive and anxiety symptoms. The patient was started on escitalopram 10 mg after the first week of hospitalization. After two weeks, the patient suffered a fall while trying to get to the bedside commode when he was found to have proximal lower extremity weakness and the first decrease in DTR's of bilateral knee. Neurology recommended lumbar puncture which showed markedly elevated CSF protein concentration (851 mg/dL) with cyto-albuminologic dissociation and minimal lymphocytes in the CSF, findings which are essentially pathognomonic for GBS. The patient was successfully treated with five sessions of plasmapheresis in an alternating day fashion while continuing SSRI treatment. Conclusion: While GBS is traditionally thought of as a peripheral neuropathy, growing evidence exists to support a central component of the disease. This must be taken into consideration so as not to miss diagnosis and therefore treatment of this potentially life-threatening disease. CNS involvement is an aspect of GBS in which further research is needed. Contrast enhanced MRI at disease nadir may help to identify CNS involvement in GBS and would be worthy of study in the future.

No. 25

Identifying Trends in Incidence of Delirium During Inpatient Hospitalizations to Determine Development of Prevention Strategy

Poster Presenter: Elaine Leo, D.O., M.H.A.
Co-Authors: Suporn Sukpraprut-Braaten, Andrew J. Powell, M.D., Todd Brackins

SUMMARY:
Delirium has symptoms of inattentiveness and disorganized thoughts or change in consciousness level. Symptoms develop acutely and fluctuate throughout the day. In this study,"delirium" is a conglomeration of ICD9&10 codes describing altered mental status or metabolic encephalopathy. Patients vulnerable to delirium have predisposing risk factors of older age, male, history of dementia or delirium, hearing or vision impairment, or chronic renal or hepatic disease. Some events precipitating delirium are infections, sleep disturbance, dehydration, immobilization, alcohol or drug withdrawal, hypoglycemia, and extreme pain. Interest occurred after treating a delirious patient on medical floor who was paranoid and aggressive. Research goal was to analyze trends in hospital acquired delirium to determine area of focus for starting prevention strategy. Methods: Retrospective cross-sectional analysis of discharge data from patient admissions at County hospital's medical or observational unit for at least 24 hours between Jan 1, 2011 and October 13, 2016. Data set queried: 36,165 total patient encounters. Encounters with discharge diagnosis of delirium =2,266; then excluded subset of encounters that had mental status change as problem on admission (2042 encounters). The remaining 224 encounters were determined to have hospital acquired delirium and analyzed for trends. Primary end point was incidence of delirium. Null hypothesis= incidence of hospital-acquired delirium develops randomly. Alternative hypothesis= incidence of hospital-acquired delirium is greater with predisposing risk factors or precipitating factors. Factors selected for analysis: age, sex, distance from patient's home city, discharge unit, directionality of windows in patient rooms and season as a way to extrapolate amount of sunlight affecting circadian rhythm and sleep. Results: Delirium Incidence Rate: 0.62%. Prevalence rate: 6.26%. Female encounters: 53%. Greatest occurrence of hospital acquired delirium 29% of time in 71-80 years old. 107 encounters occurred in patients living <15 mi. from hospital. 4 encounters occurred in patients living > 75 miles from hospital. Encounters with CCU involvement or discharged from surgery floor had more hospital acquired delirium. CCU sun atrium rooms had the most hospital acquired delirium encounters per room. Comparing patient rooms by direction the room's windows faced had statistically significant results. Incidence of delirium in different seasons was not statistically significant.Conclusion: Both men and women develop delirium. Distance of hospital from home is not protective. There were great limitations on data available. Patient location when delirium occurred was not captured. There are many confounding factors. Opening and closing of window blinds may affect sunlight and was not controlled. Measurement of sleep quality was not available. Interventions to prevent delirium need to address multiple components.

No. 26

Extensive Right Frontal Gray Matter Heterotopia Presenting as Social Anxiety and Minor Developmental Delays in an 11-Year-Old Boy

Poster Presenter: Elio Pedroso Conroy, M.D.
Co-Authors: Abhishek Wadhawan, M.D., Nasima Nusrat, Farooq Mohyuddin, M.D.

SUMMARY:
Gray matter heterotopia (GMH) are a group of disorders characterized by abnormality in the development of cerebral cortex, resulting from abnormal migration of neuroblasts. As a consequence, ectopic gray matter may be found in various locations within the brain, ranging from periventricular area, white matter, or the subpial area. This in turn, may lead to neuro-psychiatric symptoms, the severity of which depends on the location and size of the lesions, and the associated malformations in the brain. Epilepsy, neuro-developmental abnormalities, autism spectrum disorder, mood symptoms, psychosis, anxiety, and behavioral disturbances have been frequently reported in patients with GMH. We highlight a case of an 11 year old boy with right frontal lobe heterotopia, who initially presented with social anxiety and minor developmental delays. AJ is a 11 year-old Caucasian male, born with elective artificial

insemination to a female couple, who presented with complaints of severe anticipatory anxiety in the context of new social settings and nocturnal enuresis. His symptoms of social anxiety were first noticed at the age of 9 years. His developmental history was significant for lack of crawling, lack of coordination (gross-motor control), and borderline difficulty with mathematics at school. His mental status was significant for a guarded attitude, poor eye contact, anxious mood, tearful affect, delayed latency in articulating sentences, and thoughts related to fear of unknown situations or losing control. He received Fluoxetine 10mg PO daily and psychotherapy for two years along with physical therapy, which helped him moderately in managing his anxiety and regaining his daily functioning. Over the course of treatment, he was diagnosed with social anxiety disorder. When AJ was 11 years old, he had his first episode of complex partial seizure, which prompted a neurological consult. Brain MRI imaging studies revealed extensive right frontal transmantle GMH, with associated multifocal right frontal lobe polymicrogyria, hypoplasia of the entire right frontal lobe, including the basal ganglia, and hypoplastic corpus callosum with absent rostrum, genu, and splenium. EEG revealed subclinical seizure activity involving the right frontopolar region during sleep. Neuropsychological evaluation revealed deficits in executive functioning, processing speed, and graphomotor control. AJ was started on Oxcarbamazepine 450mg PO twice a day, and no new episodes of seizures were reported after that. In AJ, GMH probably led to all of his neuro-psychiatric symptoms. GMH follows an X-linked, or an autosomal pattern of inheritance. For GMH patients with intractable epilepsy, surgical resection of lesions can be done. There is dearth of literature on managing the psychiatric symptoms associated with this disorder. This case underscores the need for psychiatrists to be aware of this rare cause of neuro-psychiatric symptomatology in patients of all age groups, especially children.

No. 27

A Reverse Phineas Gage? Unique Neuropsychiatric Sequelae of a Frontal Lobe Stroke and Review of the Literature

Poster Presenter: Ryan P. Schwer, D.O.
Co-Authors: Landon S. Frost, Andrew Buchholz

SUMMARY:
Mr. X is a 59-year-old retired male with past medical history of COPD, GERD, HLD, HTN, Alcohol Use Disorder, and Tobacco Use Disorder who presented to emergency department with a 1-2 day history of right shoulder and leg weakness culminating in a fall witnessed by his wife as well as a 3-4 day history of acute behavioral changes, reported by his wife as significantly increased agreeableness and pleasantness. The patient's wife stressed the importance of this behavioral change, noting his longstanding history of aggressiveness and argumentativeness – behaviors and attitudes exacerbated by his 30-year history of consuming 10-12 beers and smoking 1-2 packs of cigarettes daily. During his interview in the ED, the patient reported that he lacked desire to consume alcohol or smoke cigarettes since the onset of his symptoms. On physical exam, the patient was noted to appear disheveled, looking older than stated age, and urinated on himself in the ED. His demeanor was pleasant, though somewhat docile, with poverty of speech. He exhibited a course tracking nystagmus in leftward gaze as well as a right facial droop, right HF/KF/DF 4/5 strength, and an ataxic native gait. Non-contrast head CT in the ED was remarkable for low attenuation in the left basal ganglia and left frontotemporal region. The patient was admitted to the Cardiology unit for subacute stroke workup. An MRI/MRA was performed, which demonstrated subacute watershed infarction in the left ACA/MCA distribution, as well as in the left caudate nucleus. Also remarkable, was an occlusion of the left internal carotid artery from the jugular bulb to the Circle of Willis, as well as a caudate lesion, thought to be secondary to occlusion of the Recurrent Artery of Heubner. Throughout the course of his hospitalization, Mr. M remained calm, polite, and docile. He denied desire to consume alcohol, although endorsed slight desire to smoke, which was controlled with NRT. Patient's wife maintained that this was a marked change in his personality and previous behavior. Extended tracking of this patient demonstrated that these behavior changes and neuropsychiatric sequelae, including abstinence from alcohol and tobacco, remained and were likely permanent. In this poster, we discuss the unique neuropsychiatric manifestations of this patient's

frontal lobe stroke and contrast it to other potential sequelae that can arise from frontal lobe lesions. We pay special attention to the neuroanatomy of the frontal lobe and discuss how the location of the lesion impact behavior, cognition, and executive function. Lastly, although this patient's motor symptoms made imaging a logical next step, we review the importance of head imaging in patients with acute or subacute behavioral abnormalities without clear etiology on history, physical exam, and lab work up.

No. 28

Effect of ECT on Catatonia and Its Possible Etiologies and Comorbidities

Poster Presenter: Sean Lowell Wilkes, M.D., M.Sc.

SUMMARY:

Background: While Parkinsonism is not uncommon in schizophrenia patients treated chronically with antipsychotic medications, comorbid idiopathic Parkinson's disease in such patients is relatively rare. This can present a number of challenges in both diagnosis and selection of appropriate treatments. In addition, the emergence of catatonic symptoms and medical comorbidities and associated delirium can also complicate the diagnostic picture, and may require additional measures for the effective treatment of these multiple comorbidities. As demonstrated with our patient, electroconvulsive therapy (ECT) is one available modality known to have some effectiveness in the treatment of schizophrenia, Parkinson's disease, catatonia, as well as delirium which in its hypoactive form can present as catatonia. **Case:** GS is a 62-year-old male veteran with a history of schizophrenia, Parkinson's disease, and BPH, who was admitted to the medicine ward with suspected anticholinergic toxidrome secondary to overdose of his prescription quetiapine. He had recently changed medications from clozapine, with which he had been treated for several years to quetiapine. He remained on the medicine service due to poor oral intake needing either IV fluids or a NG tube, and urinary retention thought to be the result of the anticholinergic toxidrome in combination with his already extant BPH. He needed an indwelling Foley's catheter to relieve him of his urinary retention. While hospitalized, he developed worsening symptoms of psychosis and soon became acutely catatonic. It was unclear if he was also delirious and may have had a seizure in view of his behavior of staring into space. He was given a trial of aripiprazole to treat his psychosis, lorazepam for catatonia, and IV valproic acid for possible delirium and seizure. All these interventions had minimal effect on his symptoms. A trial of amantadine led to increased verbalization, but worsening of psychotic symptoms. He was started on clozapine with slight improvement, but the patient essentially remained in bed and would often refuse treatment. The patient was then referred for ECT and his symptoms improved drastically. **Discussion:** The diagnosis of catatonia in hospitalized patients with medical comorbidities can be challenging, as can the selection of appropriate treatment in such a patient with comorbid schizophrenia, Parkinson's disease, and possible hypoactive delirium. Here we discuss the diagnosis of catatonia and its possible etiologies, which can share a number of overlapping clinical features. Furthermore, we discuss the indications for ECT in this patient, which has demonstrated some efficacy in the treatment of catatonia and its possible etiologies including schizophrenia and delirium, as well as Parkinson's disease.

No. 29

Impulse Control Disorder in an Otherwise Normal Healthy Female With Agenesis of the Corpus Callosum: A Case Report With Literature Review

Poster Presenter: Sridhar Babu Kadiyala, M.D., Ph.D.
Co-Author: Miles E. Driscoll, M.D.

SUMMARY:

The Corpus Callosum is both the major and largest myelinated fiber tract containing more than 200 million axons connecting both cerebral hemispheres and is responsible for integration of various modalities of information between hemispheres. Agenesis of the corpus callosum is a congenital defect and affects the growing fetus in the first trimester which can occur either in isolation or with other genetic abnormalities leading to various neurodevelopmental disorders. Several neuropsychiatric syndromes have been identified in patients with agenesis of corpus callosum ranging from small monogenic changes to significant chromosomal changes. Agenesis of the corpus callosum, along with other abnormalities, can lead to

various developmental issues including seizures, intellectual disability with learning problems requiring special education, developmental and gross motor delays. Here we present a case of agenesis of corpus callosum in a twenty seven year old female that went undiagnosed for twenty two years. During this period, the patient was asymptomatic other than a learning disability requiring special education throughout her academic career. As the patient developed gradual weakness and left sided tremor, magnetic resonance imaging (MRI) of the brain was obtained, which revealed complete agenesis of the corpus callosum with dysplastic left cerebellar hemisphere. The patient was referred to psychiatry for obsessive compulsive traits and was subsequently diagnosed with impulse control disorder with poor insight and judgment that improved with behavior modification and medication. Although medication trials with various atypical antipsychotics improved her behavior, she developed persistent prolactinemia, galactorrhea and amenorrhea. Previous studies have shown that corpus callosum size appears to be play an important role in the emergence of psychiatric illnesses like schizophrenia; however, controversy exists as patients with agenesis do not consistently present with schizophrenia. Therefore, we hypothesize that the emergence of poor impulse control with obsessive traits in our patient appears secondary to the sequela of the decreased integration of complex sensory information between the cerebral hemispheres. Understanding how the brain functions in patients with agenesis of corpus callosum may provide valuable insights into how sensory information is processed and potential compensatory mechanisms involved. Functional MRI (fMRI) or positron emission tomography (PET) studies will be of crucial value in elucidating the mechanisms of physiological brain functioning and developing better therapeutics.

No. 30

Psychiatric Manifestations of Schizencephaly: A Primer and Systematic Review

Poster Presenter: Suzanne Lippman

SUMMARY:

Background: Schizencephaly, a rare congenital disorder, is defined as a gray matter-lined cleft extending from the pial surface to the ventricle of the brain. It is classified as either bilateral or unilateral and either closed-lip (type 1) or open-lip (type 2). Depending on the areas of the brain involved, patients have a variety of clinical presentations, including those of psychiatric nature. **Objective:** (1) To qualitatively and systematically review thirteen cases of psychiatric manifestations of schizencephaly **Methods:** We performed a systematic review of the literature following the PRISMA guidelines and used the PubMed, PsycINFO, and Cochrane database of systematic reviews to identify cases of psychiatric manifestations of schizencephaly. The main search term was "schizencephaly" and an accessory item was added, either "psychosis," "psychiatry," "psychiatric manifestations," "schizophrenia," "bipolar," "mania," "depression," "irritability," "anxiety," "impulsivity," or "temper." Inclusion criteria consisted of case reports of schizencephaly with psychiatric manifestations written in English. **Results:** We identified a total of eleven separate articles with a total of thirteen unique case reports of psychiatric manifestations of schizencephaly in children and adults. 69% of patients had history of an episode of psychosis, 31% had a history of a depressive episode, 31% had a history of manic or hypomanic episode, 8% had a history of obsessive-compulsive disorder, and 15% had a history of substance use disorder. Regarding type of schizencephaly, 54% had unilateral, closed-lip type, 15% had unilateral, open-lip type, 23% had bilateral, closed-lip type, and 8% had bilateral schizencephaly with open-lip type on the right side and closed-lip on the left. Also, 69% of cases were male and 31% were female. Associated manifestations included 39% of cases with any history of seizures, 77% with any motor deficit, and 62% with any cognitive deficit, including learning, memory, and attention. **Discussion:** Schizencephaly can present with variable psychiatric manifestations, with associated seizures and motor and cognitive changes. Rupture of intracortical connections caused by schizencephaly may have contributed to the assorted psychiatric manifestations seen in these patients. Brain imaging showed involvement of each lobe of the cerebral cortex in multiple cases, often with the defect extending to the corpus callosum and lateral ventricle. Future research should investigate specific

brain circuit abnormalities that contribute to these psychiatric presentations.

No. 31

Challenges in Dealing With Homicidal Ideations in a Patient With Recent Stroke

Poster Presenter: Mariyah Z. Hussain, M.B.B.S.
Co-Author: Jeffrey I. Bennett, M.D.

SUMMARY:

Case: The patient is a 56 year old Caucasian male, with a past history of thalamic stroke five years ago and a recent right thalamic stroke presented to the emergency department with homicidal ideations toward his wife in the context of a trivial matter. Past psychiatric history was significant for Major Depressive Disorder, which was diagnosed post-stroke along with personality changes. Prior to the recent stroke, patient was described as a calm and friendly individual who held no prior psychiatric history. Following his stroke several months ago, he was admitted to the neurology. This hospitalization was complicated due to altered mental status possibly emerging from uremic encephalopathy as he has chronic kidney disease. Later because of his elevated CRP and ESR, a brain biopsy was performed but no indication of vasculitis was evident. An MRA Head and Neck demonstrated possible of right vertebral artery stenosis. Post craniotomy, there was wound dehiscence and MRSA infection requiring ICU admission. Following ICU discharge, the patient became verbally threatening and subsequently was physical aggressive. When the patient refused to go to a skilled nursing facility, an ethics consultation was requested. Psychiatry was consulted to assess for decision making capacity. Psychiatry was re-consulted when the patient started expressing homicidal ideation toward his wife during the hospitalization. Despite this situation, his wife had agreed to take him home, but soon after discharged returned to the emergency department after she was struck twice by him. Again, after evaluation, he was discharged home upon the request of his wife. A month later, he became minimally responsive after an apparent seizure. He was admitted and an EEG was normal, but levetiracetam was initiated prophylactically. He was discharged home, but returned to the ED in a month with homicidal ideation toward wife. At that time, he was alert and oriented; had a depressed mood and irritable affect. He lacked insight into his illness and was not remorseful of the threats to his wife or how this situation could lead to a more serious outcome. A psychiatric admission was deemed necessary. Conclusion: Following stroke, emotional disturbances are common which has led to the emergence of more sophisticated terms such as post-stoke emotional incontinence and post-stroke anger proneness. However, it is of note when homicidal ideation arise such as in this case, it can result in dramatic caregiver burden, diminished quality of life, and diagnostic challenges. We discuss the challenges in dealing with homicidal ideation which reduces the successful outcomes of rehabilitation therapy. We will present brain images and will further discuss other conditions which could have led to his homicidal ideations considering this is rare with thalamic infarcts.

No. 32

Dystonic Reaction Following Administration of Venlafaxine

Poster Presenter: Mariyah Z. Hussain, M.B.B.S.

SUMMARY:

The current literature on SSRI induced movement disorders include case reports on dystonia, akathisia, akinetic-rigid syndromes, and dyskinesias. Venlafaxine, a serotonin-norepinephrine reuptake inhibitor, has been reported as etiologic in association with focal, segmental dystonia. We report a case of a more generalized dystonic reaction associated with the use of venlafaxine, which we believe is unique. In addition, this case has several confounding factors including the presence of substance use, tremors, diarrhea, neuropsychological abnormalities hence leading to differential diagnosis of generalized dystonia, a serotonin syndrome, psychogenic dystonia, as well as venlafaxine-induced dystonia. As such, this case is an example of the diagnostic challenges posed by the emergence of dystonia in the psychiatric patient population. A 25 year old single Caucasian female with a past psychiatric history of Major Depressive Disorder, was admitted to the psychiatric unit secondary to suicidal ideations. Her history was also significant for use of daily IV heroin for many years. She was initiated on Venlafaxine XR 37.5mg once

daily for depression and anxiety. Patient had a trial of Venlafaxine XR in the past and this has served to be beneficial without experience of any adverse outcomes. The following day of starting Venlafaxine, patient was noted to have significant visible involuntary neck tremors which persisted for two days. This was in addition to lower extremity muscle spasms and ataxia. At this time, patient also complained of nausea and diarrhea. Neurology service was consulted and upon conduction of MRI cervical spine, it revealed no significant findings. Lab findings were unremarkable except for a positive C difficile test which was managed with appropriate antibiotics later. Patient was noted to have hyperreflexia in both lower extremities but sensations were intact. Pronounced ataxia in bilateral lower extremities in heel-to-shin test was observed along with an unsteady tandem gait. Concerns regarding serotonin syndrome, Venlafaxine induced dystonic reaction, psychogenic movement disorder and heroin induced withdrawal were considered. Venlafaxine was discontinued and thereafter, the tremors significantly improved. She was switched to Bupropion, which the patient tolerated well. Further hospitalization was notable for emergence of hypomanic symptoms, which prompted the addition of Lamotrigine. Venlafaxine is a novel antidepressant that holds prominent anti-depressant and anti-anxiety properties and acts on both serotonin and norepinephrine reuptake inhibition. This case illustrates the complexity of diagnosing a serotonin syndrome versus a medication induced dystonic reaction in a setting of opiate withdrawal; also raising concerns for metabolic causes. This poster will focus on challenges involved in reaching to an appropriate diagnosis to prompt appropriate treatment measures in a similar setting.

No. 33

Clozapine Prescribing Trends in a General Hospital in Singapore: The Story Over Nine Years

Poster Presenter: Hui Yi Ong

SUMMARY:

Background: Clozapine is widely recognised as the most efficacious antipsychotic in treatment-resistant schizophrenia. However, its side-effect profile and need for regular blood monitoring, as compared to newer second-generation antipsychotics, may render it less desirable for patients, particularly the elderly. This study aims to describe the prescribing trends of clozapine in a general hospital in Singapore from 2005-2013. Methods: Data was extracted retrospectively from the computerised prescription records of Tan Tock Seng Hospital, Singapore. This hospital has a Psychiatry Medicine department that focuses primarily on consultation liaison, but also manages mild to moderate illnesses falling under the purview of general psychiatry. All patients who received clozapine in 2005, 2007, 2009, 2011 and 2013 were selected and stratified based on age, gender and clozapine dose. Results: The total number of patients prescribed clozapine increased from 48 in 2005 to 93 in 2013 (94% increase). Of the total number of patients on clozapine, an average of 39.1% were male and 60.9% female. The mean age of patients increased from 42 years in 2005 to 50 years in 2013. The total number of elderly (?60) prescribed clozapine increased, from 4 in 2005 to 15 in 2013 (275% increase). The mean daily dose increased from 88.9mg in 2005 to 135.3mg in 2013, and the dose range increased from 6.25 – 350mg in 2005 to 12.5 – 850mg in 2013. Only a small proportion received daily doses in excess of 300mg, albeit increasing in number over the years (n=2 (4.2%) in 2005 vs n=10 (10.8%) in 2013). Those receiving <100mg/day daily dosage remained the largest proportion over the years (64.6% in 2005 and 44.1% in 2013). Discussion and conclusion: Despite valid concerns about the safety profile of clozapine and the emergence of new antipsychotics with more favourable side-effect profiles, clozapine use (both in terms of number of patients prescribed clozapine and dose of clozapine prescribed) is still increasing, indicating that it remains an integral part of the treatment of schizophrenia. There is a clear preference to maintain patients on lower dose ranges. Also, the absolute number of patients on clozapine remains low, perhaps reflecting a reluctance in the initiation of clozapine by clinicians. Further studies need to be carried out to identify any barriers to clozapine initiation and maintenance.

No. 34

Case of Acute Reversible Hyperglycemia With Olanzapine Administration in Non-Diabetic Patient

Poster Presenter: Jatinder Singh, M.D.

Co-Author: Harsimar Kaur

SUMMARY:
Introduction In our clinical practice, increasing number of patient s are being prescribed second generation antipsychotics for increasing number of indication including nonpsychotic patients, mainly due to their unmatched efficacy which tends to outweigh the metabolic side effects(1). The usual indicator of these side effects remains weight gain (BMI), with the low incidence of actual monitoring(2) despite a call for such regular monitoring from current guidelines. To make things worse there is now evidence of weight independent adverse metabolic changes like glucose intolerance and dyslipidemia associated with SGA, which are more acute in nature(3), likely to have unique mechanism of action, manifest before any change in weight, could possibly have dose relationship and usually missed in young adults without any comorbidities. CASE Our patient is 26-year-old African American female with the diagnosis of a Schizoaffective disorder. There was no history of Diabetes in this patient as per previous available record. Her first ever exposure to Antipsychotics, Olanzapine 10 mg, and Quetiapine 700 mg was in Feb 2014 while she was incarcerated in Prison and later transferred to an inpatient facility. She was reportedly compliant with medications. Regular Blood glucose done on admission was within normal limits at 95 mg/dl (45 to 99). She was subsequently discharged home on Olanzapine 10 mg QAM and 12.5 mg QPM. Again admitted to inpatient facility due to relapse of her schizoaffective disorder She was restarted on Olanzapine and which was built up to 20 mg. Her blood Glucose continued to rise in relation to olanzapine until it reached 299 mg /dl when she required insulin units to lower it down. The decision to discontinue and cross taper olanzapine was made and the Patient blood glucose returned to normal levels once olanzapine was discontinued and remained within normal limits till discharge from hospital From the above data, it seems patient was sensitized to olanzapine in terms of Blood Glucose dysregulation on restarting on this current admission and there was kind of dose relationship observed in above data and it returned to near normal on discontinuation. On 1 years follow up of the patient, she remains nondiabetic and on antipsychotic treatment Discussion: There has been increasing recognition that atypical antipsychotics are associated with an increased incidence of obesity, type 2 diabetes, and other metabolic side effects. Olanzapine specifically has been associated with severe metabolic consequences, including weight gain and increases in fasting glucose and insulin (4, 5). These effects have been observed and reported in a time frame of weeks and months rather than hours or days in clinical studies. Future prospective clinical studies focusing on identifying which reliable metabolic alterations might be useful as potential screening tools for assessing patient susceptibility to acute hyperglycemia, associated complications.

No. 35

An Undocumented Interaction Between Olanzapine and Lopinavir-Ritonavir Causing Severe EPS

Poster Presenter: Jeffrey Parker Burrow, M.D.

SUMMARY:
Introduction: Extrapyramidal Symptoms are symptoms seen sometimes as a reaction to antipsychotics. Symptoms are similar to those of Parkinson's disease due to the similarity of a dopamine blockade in the nigrostriatal tract to the loss of dopaminergic neurons from the substantia nigra. The symptoms include bradykinesia, cogwheel rigidity, resting tremor, and other parkinsonian symptoms. The typical antipsychotics have been reported to have a risk of up to 10% of causing some form of EPS, and the atypical antipsychotics have a much lower incidence of EPS. Reports of the agent used in this case, IM olanzapine, report it to be around 2-4%. In this case an unreported interaction between an injectable olanzapine and HIV medication may have led to higher than intended level of olanzapine and thus a severe EPS reaction on presentation to a psychiatric unit. Case: CL is a 50 year old man with schizoaffective disorder-bipolar type who presented with worsening depression and psychosis. He had been previously treated before in the same hospital in 2013, and stabilized on risperidone without side effects. He presented in 2017 to the ED with symptoms of depression, SI, and AVH. He was not on any psychiatric medications at this time but was taking lopinavir-ritonavir, metoprolol, and lisinopril. Patient was given 10 mg of IM olanzapine in the ED, continued on his current

medications, and transferred to inpatient psychiatry the next morning. On presentation to the unit patient was in moderate distress and unable to speak per staff. When examined patient was in bed with rhythmic bilateral contractions of lower limbs, upper limbs, neck and jaw muscles. On passive movement he had cogwheel rigidity. He was given 50 mg IM of diphenhydramine, and had some response, able to speak more easily, though continued to have significant resting tremors. This was repeated. His symptoms continued to abate slowly and he continued to have rigidity and tremor. He was given 4 mg of PO trihexyphenidyl in 2 doses later that evening, and his symptoms began to abate. The next morning patient had some residual rigidity in his jaw muscles leading to difficulty speaking. Trihexyphenidyl was tapered over the next 3 days. He had complete resolution of EPS before being transferred to a facility that could provide ECT. Discussion: This case was an interesting and severe presentation of EPS acutely after IM olanzapine. Initially patient had no side effects, but less than 16 hours later there was progressive EPS. The patient had been on antipsychotics in the past including haloperidol, risperidone, and a trial of olanzapine that failed due to weight gain. He had never had EPS and the previous use of olanzapine was not on this antiviral regimen. No drug interaction database used indicated that this combination would lead to EPS or elevated drug levels, but a review of the CYP enzymes involved showed that both antivirals inhibit 1A2 and 2D6 which process olanzapine as a substrate.

No. 36

The Use of SSRIs in Post-Ischemic Stroke Motor Recovery: A Systematic Review and Meta-Analysis

Poster Presenter: Mark Kvarta, M.D., Ph.D.
Co-Authors: Bhinna Pearl Park, M.D., Ellen Breen, M.D., Michael Stephen Peroski, D.O., Seth S. Himelhoch, M.D.

SUMMARY:
Context: Motor deficits are among the most common deficits caused by stroke. Improvement in motor function is a crucial part of stroke recovery which may lead to improved quality of life for patients. Objective: To assess the effects of SSRIs versus placebo on the motor function of adults with recent ischemic stroke. Data sources: English-language articles from Jan 1980 through Sept 2016 were searched in two electronic databases, PubMed and PsychINFO. Study Selection: The criteria for inclusion required studies to be randomized placebo controlled trials of treatment with SSRIs vs placebo in patients who suffered an ischemic stroke. The studies were restricted to samples of adults aged 18 or older, and had to include scores on a scale measuring motor function. Studies in which SSRIs were used only to treat depression were excluded. The final search resulted in three studies. Data extraction: Two authors independently reviewed them for meeting eligibility criteria. The kappa statistic was 0.856, consistent with good agreement. Results: This quantitative meta-analysis showed that treatment with an SSRI post-stroke significantly improved motor function in stroke patients as compared to placebo. The overall effect size was medium and was statistically significant with a standard mean difference of 0.573 (95% confidence interval of 0.243-0.903) (p=0.001). Heterogeneity was not statistically significant (p=0.349). Conclusion: The statistically significant moderate effect of SSRIs on post-stroke motor improvement suggests that this is a potentially effective intervention worth further exploration, especially in a population well known to have significant depressive symptoms and motor impairment.

No. 37

Delayed-Onset Choreoathetosis as a Complication of Lithium Toxicity

Poster Presenter: Michael Thomas Ingram, M.D.
Co-Author: Adedapo B. Williams, M.D.

SUMMARY:
RS is a 59-year-old Caucasian male who called 911 due to acute onset confusion, coarse tremors, slurred speech, ataxic gait, and generalized weakness. He had a history of bipolar 1 disorder managed with lithium and escitalopram. He had no previous history of tardive dyskinesia, chorea, or any other movement disorder. His past medical history was significant for hepatitis B, diabetes mellitus (type II), peripheral neuropathy, and cirrhosis. On admission, his lithium level was elevated to 4.3 and his vital signs were unremarkable except for bradycardia. A general physical examination

revealed altered level of consciousness and psychomotor agitation with no focal neurological deficits or visible signs of head trauma. RS was lethargic, oriented only to his name, and appeared thin, cachectic, and unkempt. His speech was slurred and incomprehensible. There were coarse tremors of his upper and lower extremities as well as "involuntary jerky movements" of all four extremities described as non-repetitive and nonrhythmic. Laboratory studies were significant for pancytopenia, mild hyponatremia, slightly elevated ammonia level, and signs of acute kidney injury. Urine drug screen and blood ethanol level were unremarkable. Telemetry revealed sinus bradycardia with intermittent episodes of atrial fibrillation, no ST changes, and a QTc of 532. Chest X-ray showed no acute disease. MRI with and without contrast showed mild global cortical atrophic changes with no evidence of brain stem pathology or acute changes. Emergency hemodialysis was initiated with normalization of his lithium level and metabolic panel within 36 hours. Despite slow resolution of his bradycardia and confusion, RS developed slow athetotic movements of his hands and feet bilaterally in addition to repetitive tongue protrusion, jaw movements, grimacing, and eye blinking. These movements slowly resolved over the next 48 hours with significant improvement in his mental status. In this poster, we present a rare case of delayed-onset choreoathetosis as a complication of lithium toxicity and offer recommendations for management based on clinical experience and a systematic review of related cases in the literature. Lastly, we describe a theoretical pathophysiological mechanism to explain the relationship between lithium toxicity and movement disorders.

No. 38
WITHDRAWN

No. 39
Ondansetron to Treat Tardive Dyskinesia: A Case Report
Poster Presenter: Nicole Christina Rouse, D.O.

SUMMARY:
Ms. T, a 55-year-old African American female with a past psychiatric history of bipolar I, obsessive compulsive disorder, and generalized anxiety disorder, presented to the neurology clinic with history of tardive dyskinesia for 7 months. Treatment with Risperdal was initiated 3 months prior to onset of orofacial dyskinesia. Medication trials of Cogentin, Benadryl, artain, gingko and klonopin either did not improve her symptoms or she endured adverse effects. Tetrabenazine was discussed with Ms. T, however was contraindicated secondary to her significant history of bipolar-depression and suicidal ideations. She was then started on ondansetron 4 mg daily as a trial to treat her tardive dyskinesia. In a follow-up appointment 4 weeks later, she reported significant improvement of her symptoms. Tardive dyskinesia involves involuntary movements of facial, limb, and truncal muscles, and a rare adverse effect of dopamine antagonist medications: typical antipsychotics, risperdal, metoclopramide and pimozide. In the nigrostriatal dopamine pathway, receptors become upregulated with prolonged use of dopamine antagonist activity and may result in abnormal involuntary movements. Serotonin and dopamine have an interesting relationship in this pathway, and 5-HT antagonist activity has been reported to reduce tardive dyskinesia symptoms. Ondansetron is a selective 5-HT3 antagonist with documented cases of success in treatment of tardive dyskinesia. In this poster, we discuss the relationship between serotonin and dopamine in the nigrostriatal pathway in treatment of tardive dyskinesia, often an irreversible and difficult-to-treat disorder.

No. 40
WITHDRAWN

No. 41
Improvement of Smell and Taste With Discontinuation of Buprenorphine/Naloxone
Poster Presenter: Ruchi Sood

SUMMARY:
Introduction: Buprenorphine/naloxone, a partial opioid agonist, has been described to induce smell and taste aversion (Lonergan et al., 2011) and impairs chemosensation (Mizera et al., 2016). Discontinuation of buprenorphine resulting in enhancing smell and taste has not heretofore been described. Two such cases are presented. Method: Case 1: A 36 year old, right-handed married male

had a 10-year history of opioid abuse including fentanyl, acetaminophen/oxycodone and heroin. A few days prior to presentation he was on a variety of substances including 8 mg buprenorphine/2 mg naloxone every 12 hours, a fentanyl patch 100 mg every 48 hours, snorting heroin 1/2 gram each day, smoking marijuana daily and cigarettes one pack per day. He was undergoing withdrawal manifested by insomnia, fatigue, anxiety, and poor appetite. Results: Clinical Opiate Withdrawal Scale: 21 including diaphoresis with sweat streaming off face, constant rhinorrhea, lacrimation, vomiting, diarrhea, and frequent adventitious movements. After being placed on buprenorphine/naloxone sublingual 4 mg/1 mg twice a day, he observed a total absence of his ability to smell and taste. Within 2 days of suddenly discontinuing buprenorphine/naloxone, his smells and taste returned to 50% of normal. Within a week of him restarting buprenorphine/naloxone, his ability to smell and taste disappeared again. Case 2: A 34 year old right-handed married female with 10 year history of opioid dependence (with past hospitalization for detoxification) presented using 100 microgram patch of fentanyl every 48 hours, snorting heroin 0.5 grams everyday, and smoked one pack per day of cigarettes, with complaints of impaired memory. Results: Clinical Opiate Withdrawal Scale: 8 including rhinorrhea, lacrimation, pupils moderately dilated, increased irritability and anxiousness and mild diffuse discomfort. After being placed on buprenorphine/naloxone 8 mg/2 mg twice a day, she observed a reduced ability to smell and taste to 70% of normal. Within several days of stopping buprenorphine/naloxone, her smell and taste returned to 95% of normal. After restarting the buprenorphine/naloxone her smell and taste dropped down again to 70% of normal. Within a week of her restarting buprenorphine/naloxone, her ability of smell and taste disappeared again. Discussion: The use of opiates has been reported to alter taste (Schiffman, 2015) and reduce smell (Lotsch et al., 2012). Mizera specifically listed buprenorphine/naloxone as an origin for chemosensory loss (Mizera et al., 2016). However, the discontinuation of buprenorphine/naloxone has not previously been described to improve smell and taste. Maybe the reduction in olfactory function was partial and due to a reduction in specific G protein-coupled receptors (GPCRs) with reduced cAMP as the second messenger (Lotsch et al., 2012). Given the above, a trial of buprenorphine/naloxone in those with hyperosmia and hypergeusia may be warranted.

No. 42
WITHDRAWN

No. 43
Khat-Induced Psychosis Treated With Risperidone
Poster Presenter: Bechoy Abdelmalak, M.D.
Co-Authors: Ashraf Elshafei, M.D., Ronnie Swift, M.D.

SUMMARY:
Mrs. E. is a 35 year-old Yemeni female, Arabic speaking, with a past psychiatric history of self-reported Schizophrenia and 4 prior inpatient psychiatric hospitalizations, who presented to our mental health clinic with a complaint of "I am hearing voices and they are talking to each other." Patient reported an extensive history of Khat use and poor response to multiple treatment regimens, including Depakote, Xanax, Haldol, Abilify and Zyprexa. Patient reported that usually she hears a female voice commanding her to use Khat, "To get better." She was started on Risperidone 0.5mg at bedtime, and started to show improvement within 4 weeks, along with a decreased need for Khat use. She was also referred to Dental Service due to brown staining and discoloration of her gums, cracks in here teeth and dental structural damage secondary to her Khat use. Khat is a flowering evergreen shrub native to East Africa and the Arabian Peninsula. The young and tender leaves of the khat tree (Catha edulis forsk), known as "khat," "qat," or "miraa," are traditionally chewed in social settings because of their stimulating effects. The main psychoactive component of khat leaves is cathinone (S (-) alpha aminopropiophenone), which resembles amphetamine in chemical structure and affects the central and peripheral nervous system. Users, which include pregnant women simply chew the green khat leaves and keep a ball of partially chewed leaves against the inside of their cheek. Some khat users also smoke the drug, make it into tea, or sprinkle it on food. We report here a case of exacerbation of psychotic symptoms attributed to khat chewing, which responded to Risperidone.

No. 44

Erythema Multiforme Associated With the Combined Use of Lamotrigine and Topiramate

Poster Presenter: Bechoy Abdelmalak, M.D.
Co-Authors: Norma Dunn, M.D., Ronnie Swift, M.D.

SUMMARY:

Ms. K. is a 28 year-old Caucasian female with past medical history of migraine headaches and a past psychiatric history of Bipolar disorder and marijuana use, who presented to the outpatient psychiatry service with racing thoughts, impulsivity, and mood swings. She was started on lamotrigine and the dose was gradually increased, from lamotrigine 25mg daily for 2 weeks, then to lamotrigine 50mg daily for 2 weeks, and then lamotrigine 100mg daily thereafter. Topiramate was started 10 weeks after starting lamotrigine to address migraines (Topiramate has been also used alone or in combination with bupropion to decrease marijuana cravings). Topiramate was started with 50mg at bedtime for 2 weeks and then increased to 50mg twice a day. Three weeks later, patient noted multiple small pruritic papules on her arms that spread to the trunk area that did not respond to Medrol dose pack following her visit to urgent care. Patient stated that her rash started initially when she accidently took 2 tablets of lamotrigine 100mg, and then later started to progress again when she accidently took another 2 tablets of lamotrigine the next day. Dermatology consult was placed and patient was diagnosed with Erythema Multiforme secondary to lamotrigine or topiramate. The rash slightly improved when lamotrigine was discontinued, but resolved once topiramate was discontinued. Erythema Multiforme (EM) is an uncommon, acute type IV hypersensitivity skin reaction characterized by a skin eruption, with symmetric erythematous lesions of the skin or mucous membrane possibly mediated by the deposition of immune complex (mostly IgM) in the superficial microvasculature of the skin and the oral mucous membrane. Erythema Multiforme (EM) is associated with certain infections (particularly herpes simplex and mycoplasma pneumoniae), medications, and other various triggers. Medications like lamotrigine and topiramate are metabolized to toxic metabolites, which are subsequently detoxified in most individuals. However in predisposed patients with a genetic defect, the metabolite may bind covalently to proteins. In some of these patients, the metabolite- protein adduct may trigger an immune response, which may lead to a cutaneous adverse reaction. Clinical manifestations of drug-induced skin reactions include a wide range of symptoms, from mild drug-induced exanthemas to dangerous and life-threatening generalized systematic reactions. We report one case of generalized EM in which the combined use of lamotrigine and topiramate seems to be the precipitating factor.

No. 45

Mirtazapine-Induced Violent Dreams

Poster Presenter: Bechoy Abdelmalak, M.D.
Co-Authors: Richard Gersh, M.D., Ronnie Swift, M.D.

SUMMARY:

Mr. T. is a 53 year-old African-American veteran male, with a past psychiatric history of major depressive disorder and PTSD, including multiple prior hospitalizations for suicidal behavior, who presents to the mental health clinic for depressed mood, lack of motivation, crying spells, sleeping difficulties, nightmares and flashbacks. He was started on prazosin 2mg at bedtime and mirtazapine 15mg at bedtime. Two weeks after initiating treatment, patient reported an increase in the frequency of nightmares from 1 every 2-3 days to “almost daily”, without improvement in his sleep pattern. Mirtazapine was increased to 30mg at bedtime. He returned to the mental health clinic 4 days later, reporting “daily weird and violent dreams.” He was instructed to discontinue mirtazapine and was started on sertraline with resolution of violent dreams and reduction in frequency of nightmares within one week. Mirtazapine is a tetracyclic noradrenergic and specific serotonergic antidepressant that is widely used in the treatment of depression. It acts by blocking a-2 receptors on noradrenergic neurons and enhancing norepinephrine release. Increased levels of norepinephrine act on a-1-adrenoceptors on serotonergic cell bodies, increasing serotonergic firing. Mirtazapine also is a very strong H1 receptor inverse agonist and as a result, it can cause powerful sedative and hypnotic effects. Mirtazapine, on the other hand, has been documented to show sleep-

promoting action by increasing total sleep time, sleep efficiency and slow wave sleep. Nightmares occur only in rapid eye movement (REM) sleep. Most antidepressants suppress REM sleep; hence, nightmares are not a commonly reported side effect of therapy with antidepressants. Sleep disorders are extremely rare adverse events with mirtazapine and we are reporting a case of mirtazapine worsening violent and strange nightmares that required stopping the associated medication.

No. 46

Comparison of Bipolar Detection Instruments Among Patients With Mood Disorders and Cluster B Personality Disorders

Poster Presenter: Sergio D. Apfelbaum, M.D.

SUMMARY:

Apfelbaum S (MD)*, Regalado P (PhD)+, Herman L (MD)*, Gagliesi P (MD)+. Background: Scientific literature has well established that Bipolar Disorder (BD) is frequently under-diagnosed. Studies have reported a ten-year breach between disorder onset and its proper diagnosis, in a large proportion of BD patients. However, many authors highlight the bipolar spectrum disorders over-diagnosis in patients with personality disorders, particularly cluster B. The present study compares the efficiency of several BD screening and assessment instruments to detect BD in a sample of clinical outpatients. Methods: The study included patients aged 18 to 65 years who gave written informed consent. They had to meet DSMIV R diagnostic criteria for a Mood Disorder and/or cluster B Personality Disorder. A sample of outpatients (n = 81) were assessed and arranged in 4 diagnostic groups: Mayor Depression (MD n=24), Bipolar Disorder (BD n=18), Cluster B Personality Disorders (PD-B n=19) and comorbidity of BD and PD-B (n=20). Patients who entered the study completed the Mood Disorder Questionnaire –MDQ, and Bipolar Spectrum Diagnostic Scale -BSDS at the time of inclusion, and patients' therapists completed the Bipolar Index -BI and Gahemi's Bipolar Spectrum Criteria. The DSM-IV R diagnoses were evaluated with two semi-structured interviews (MINI and SCID-II) for axis I and axis II disorders respectively, rated by a psychiatrist or psychologist blind to the results of the screening questionnaires. The instruments were compared by their Sensitivity, Especificity, Positive and Negative Predictive Values and Positive and Negative linkhood ratio. Results show good sensitivity and specificity values for the MDQ and BSCS (specificity: 0.79 vs 0.77; sensitivity 0.74 vs 0.71 respectively) and similar positive predictive values (PPV: 73%) for both instruments to identify BD. The Bipolarity Index, with an ad hoc 50-cutoff point, revealed excellent sensitivity and specificity values (0.84 and 0.90) with PPV of 87%. Finally, the simultaneous implementation of both, the screening instruments (MDQ or BSDS) and Diagnostic Criteria of Bipolar Spectrum provided a notorious improvement in sensitivity detection whit some decline in specificity values and slightly decline in PPV, but also expanded the bipolar spectrum detection regardless of identifying manic symptoms. Conclusions: The concurrent utilization of MDQ and the Criterions Gahemi's Bipolar Spectrum notably increased the sensitivity for detection of BD while still maintaining reliability. The development of a questionnaire that includes screening for manic symptoms (MDQ) plus symptomatic and evolutionary characteristic of the bipolar spectrum could significantly increase the sensitivity of the screening for BD. A discussion explores the implications of the previous findings.

No. 47

A Case Report on Late-Onset Bipolar I Disorder Due to Transient Ischemic Stroke

Poster Presenter: Sumin Park
Co-Author: Angelo De Los Angeles, M.D.

SUMMARY:

Ms. F., a 56-year-old Caucasian female with a significant history of chronic uncontrolled hypertension, hyperlipidemia, long-time cigarette smoker, history of lower extremity claudication status post bilateral femoral stents and angioplasty, presents with recurrent uncontrolled aggression with manic symptoms. Prior to recent repeated psychiatric admissions, she had no psychiatric history. Given the late-onset of personality changes and manic symptoms, MRI of the head was ordered, which revealed encephalomalacia in the white matter of the right frontal lobe near the right basal ganglia and the left cerebellum. These areas have been highly associated with manic symptoms. Although the timing of the ischemic stroke cannot be

identified, the subacute presentation of personality change and the results of the imaging study makes bipolar I due to another medical condition is highly likely. A thorough stroke workup revealed 70-80% bilateral carotid stenosis on CTA. In the setting of having multiple risk factors and having had a transient ischemic stroke before age 60, she was counseled on her high likelihood of getting a life-threatening stroke and to consider carotid endarterectomy. She was started on aspirin 81mg. She was also advised to obtain workups to rule out blood clotting disorders such as Factor V Leiden, Protein C and S. Being that the mean age of onset for bipolar I disorder is 18 years, patients with no prior psychiatric history who present later in life with signs of bipolar I should undergo a thorough medical workup to rule out other medical conditions.

No. 48
WITHDRAWN

No. 49
Using Long-Acting Injectable Antipsychotics as an Adjunct Treatment to Prevent Relapses in Rapid-Cycling Bipolar Disorder
Poster Presenter: Zaki Ahmad, M.D.
Co-Authors: Pankaj Manocha, M.D., Luisa S. Gonzalez, M.D.

SUMMARY:
Rapid-cycling Bipolar disorder (RCBD) is diagnosed when there are at least, four mood episodes in the preceding twelve months. RCBD patients are more likely characterized by manic features when compared to Bipolar disorder (BPD) patients who predominantly have depression. The annual prevalence of rapid cycling ranges from 5% to 33.3%, while the lifetime prevalence ranges from 25.8 to 43%, among all the patients with Bipolar disorder (1). Research studies indicate that apart from the traditional mood stabilizers such as Lithium, Depakote, and Carbamazepine, long-acting depot injections of first and the second generation antipsychotics (2, 3, 4), such as Haldol decanoate (5), and Risperdal Consta (6) have been used in the treatment of Bipolar Disorder. Rapid-cycling Bipolar disorder is a frequently under-diagnosed condition, which is more prevalent in women and patients with bipolar 2 disorder (7). In contrast to BPD, RCBD patients require more than a single conventional mood stabilizer like Lithium. Adding a long-acting injectable antipsychotic to Lithium or Depakote has shown to be the next best step in the management of RCBD to prevent recurrent mood episodes and subsequent re-hospitalizations in the future (8, 9). We present one such case of a 24-year-old symptomatic woman who was brought to the ER with acute mania despite having the therapeutic level of lithium. Her lithium level was 1.0 at admission. Clinicians can be confronted with treatment challenges for the prevention of recurrent mood episodes in patients who have therapeutic levels of the conventional mood stabilizers like Lithium and Depakote. We aim to review the literature on the treatment strategies for an acutely manic patient with therapeutic lithium levels.

No. 50
Possible Link Between Hypogonadism and Depression in Men
Poster Presenter: Sarayu Vasan, M.D., M.P.H.

SUMMARY:
Background: Low serum concentration of testosterone hormone has been associated with several common medical conditions such as cardiovascular disease, erectile dysfunction, diabetes, metabolic syndrome, cognitive impairment, and depression. Until recently it was unclear whether the mood disorder is confounded by concurrent physical morbidity. The objective of this study is to determine whether association between serum testosterone concentration and depressed mood in men can occur when physical co-morbidity is under control. Methods: Seventy-five men aged 55-70 referred by their primary care providers for assessment and treatment of refractory depression where 1-2 adequately delivered anti-depressant medications did not lead the patient to become symptom free. The 9- Item Patient Health questionnaire (PHQ-9) was administered to study participants to assess depressed mood. Clinical depression was defined as severe, moderate severe, moderate, mild depressive symptoms and minimal depression when PHQ -9 total score was 20-27, 15-19, 10-14, 5-9, and 0-4 respectively. Results: Many the participants scored 20-27 and 15-19 on the PHQ-9 scale. Therefore their

clinical depression was characterized as severe and moderate severe depression respectively. Treatment with anti-depressant medications using adequate dose and duration, switching and combining anti-depressants as well as augmentation with different psychotherapeutic approaches such as cognitive behavioral therapy (CBT), interpersonal psychotherapy (IPT), and problem-solving therapy (PST) were used for 12 weeks. There was no improvement in depressive symptoms based upon self-report, observation, and the assessment using the PHQ-9. Total and free testosterone levels were ordered and samples collected between 8:00AM and 11:00AM. The results showed low total testosterone levels (less than 240ng/dL) and low free testosterone levels (less than 35.0pg/mL). This group of patients received intramuscular injections 200 mg every 2 weeks. Over a 10-month period, after patients maintained mid-normal physiological levels of total testosterone (290-300ng/dL) and free testosterone level (55 – 70pg/mL), follow up psychiatric visits revealed significant improvement and remission of depression as reported by self-statements, observations, mental status evaluations, and PHQ-9 scores of 0-4. Conclusion: There is causal relationship between low testosterone level and depressed mood in males. Restoring physiologic concentration of free testosterone improves mood and reduces depression. Men with clinically significant depression would have lower concentration of free testosterone than men with no depression and this association is independent of physical health. Men with depression may benefit from systematic screening of free testosterone levels. Testosterone replacement may contribute to successful treatment of men with treatment – resistant depression.

No. 51

A Case of Catatonia in Pregnancy Successfully Treated With Zolpidem

Poster Presenter: Giana V. Dalben, M.D.
Co-Author: Sarayu Vasan, M.D., M.P.H.

SUMMARY:

INTRODUCTION & OBJECTIVE: First described in the literature in 1874 by Karl Kahlbaum, catatonia is a behavioral syndrome presenting as the inability to perform physical movement appropriately, such as in immobility, rigidity, mutism, posturing, excessive motor activity, stupor, negativism, staring, and echolalia. According to the DSM V, catatonia is not classified as a separate condition, but can be associated with other psychiatric conditions. To this point, the diagnosis of catatonia remains challenging given its co-occurrence with many psychiatric disorders, such as obsessive-compulsive disorder, post-traumatic stress disorder, alcohol and benzodiazepines withdrawal, schizophrenia, and bipolar disorder, as well as in somatic and medical illnesses. Prompt management with benzodiazepines or electroconvulsive therapy (ECT) are the mainstays of treatment and often offer very good prognosis and outcomes. CASE PRESENTATION: This case report describes a 21-year-old Hispanic female, G3P2, at 19-weeks intrauterine pregnancy (IUP), with catatonia and significant history of unspecified psychosis, mood disorders, and abuse of amphetamine and cannabis. DISCUSSION: After vast literature review, it is to the best of our knowledge that there have been no cases of catatonic pregnant patients treated with Zolpidem and our case would be the first case reported in the literature to date. Immediate treatment with benzodiazepines or ECT were not possible at the time of this patient's illness presentation. Numerous cases of catatonia in non-pregnant patients treated with Zolpidem, and multiple cases of pregnant patients treated with Zolpidem for non-catatonia-related illnesses are well documented in the literature. However, the use of Zolpidem was our patient's best chance of recovery from this devastating psychiatric illness without causing further harm to herself or her unborn fetus. Further, this case serves to highlight the special considerations that need to be made regarding the treatment of catatonia in pregnancy. CONCLUSION: This case illustrates the complicated course of catatonia in a pregnant patient where the two mainstays of treatment, benzodiazepines and ECT, were not viable options in her care. Due to these complexities, alternative treatment options had to be sought for the sake of the long-term wellbeing of the patient and her unborn fetus. Consequently, with the use of Zolpidem, the patient's catatonia completely resolved. Furthermore, we suggest that Zolpidem be considered as a valid, effective, and safe option in the treatment of catatonia in pregnancy. It is our hope that this case study will

contribute to further the research being conducted in this area to improve the quality of life in pregnant patients with catatonia.

No. 52

Three Cases of Suicide Phenomenon in Patients With Delusions

Poster Presenter: Samantha Cassandra Madziarksi, M.D.
Co-Author: Sarayu Vasan, M.D., M.P.H.

SUMMARY:
Background: Delusions are fixed, false beliefs that are persistent despite contrary evidence. Delusions can be seen in a multitude of different mental disorders, including Delusional Disorder which is characterized by at least 1 month of delusions without other psychotic symptoms. There is evidence that supports the content of the delusion can lead to emotional distress, ranging from anxiety to depression and subsequently attempted suicide. Case: We report three cases of delusional disorder that presents with depression following the emotional manifestations caused by the delusions, leading to attempted suicides. Discussion and Conclusion: The most significant affect change was seen in persecutory delusions, which was shown to cause depression especially when the patient associated a large power gap between themselves and the persecutor, or if the patient believes he/she deserved the punishment being enforced in the delusion (Green, 2006). There has also been extensive research addressing the increased rate of suicide in schizophrenic patients, with guilty delusions found to contribute the most to the severity of the suicidal ideation (Grunebaum, 2001). Patients diagnosed with depression that presented with delusions were also more likely to commit suicide in comparison to patients with non-delusional depression (Roose, 1983). However, only one study was found that recognized a similar rate (8-21%) seen in delusional disorder though the study was not statistically significant (Gonzalez-Rodriguez 2013). To our knowledge, very little research has been done to recognize the correlation of delusional disorder with depression and suicidal ideation. We report several cases of delusional disorder that presents with depression following the emotional manifestations caused by the delusions, leading to attempted suicides.

No. 53

New-Onset Bipolar Disorder With Mania and Psychosis Associated With Frontal Lobe Cerebral Aneurysm

Poster Presenter: Anum Sameera Khan
Co-Author: Sarayu Vasan, M.D., M.P.H.

SUMMARY:
Introduction: Bipolar disorder is a complicated psychiatric illness that is still being investigated for its interesting genetic and pathophysiologic manifestations. Bipolar disorder is characterized by symptoms of mania combined with episodes of major depression or hypomania. Bipolar disorder can be classified as primarily psychiatric, or can be due to a secondary organic cause. Secondary causes of organic mania are rare, but have been observed to occur in a few case reports. In depth examination of aneurysms and cerebral hemorrhages as a cause of bipolar disorder will be further investigated in this article as it has been observed that many neuropsychiatric-based pathophysiologic pathways may play a role in exuding mood and affective phenotypes. The evaluation of patients suspected of having bipolar disorder first involves ruling out the possible medical causes. Vascular aneurysms leading to subarachnoid and intracerebral hemorrhages can also be a cause of secondary mania, and will be further investigated in the following report. Case: This case report describes a 34-year-old Latino female who had no previous psychiatric history developed new onset symptoms of bipolar disorder after a frontal lobe cerebral aneurysm rupture. Patient underwent microsurgical clipping to prevent the aneurysm from rupturing again and subsequently treated successfully with a mood stabilizer and an antipsychotic. Discussion and Conclusion: Bleeding in the brain, regardless of the type of hemorrhage, can potentially be very damaging to nearby brain parenchyma and adjacent structures. Inflammatory mediators are activated in response to blood deposition, but the cascades can also potentially augment further damage and be a source of ongoing inflammation. There continue to be postulations of altered immunological parameters that may play a role in development of

psychiatric disorders including depression, bipolar disorder, autism spectrum disorders, and schizophrenia. Mood and affective disorders are viewed, in a way, as “stress disorders” in which chronic inflammation can play a role in their development. The idea that bipolar disorder can be induced from organic causes has developed from the aftermath of neurologic insults such as traumatic brain injuries, strokes, tumors, or hemorrhages. Lesions that usually induce mania are commonly in the frontal or temporal lobes and subcortically the head of the caudate and the thalamus. A few case reports have brought light to the issue of cerebral aneurysms leading to bipolar disorder or psychosis. In summary, our case highlights the importance of looking for secondary causes of mania and psychosis and it is our hope that this case study will contribute to further research being conducted in this area to improve the quality of life in these patients.

No. 54

The Fast and the Furious: A Case of Serotonin Syndrome Resulting From Snorting Multiple Medications

Poster Presenter: Manar Abdelmegeed, M.D., M.P.H.
Co-Authors: Abdullah Bin Mahfodh, M.D., Andrew Kerstein, D.O., Timothy D. Dellenbaugh, M.D.

SUMMARY:

We discuss a case of serotonin syndrome that presented with unorthodox route of administration, via inhalation. A 62 y/o female that presented to ED after she was found hallucinating with white powder around her nose. In the literature we find many cases that talk about serotonin syndrome via PO, IV and IM routes, but none discussing inhalation route. A route that is well known among addicts but not many healthcare professionals Serotonin syndrome is a critical medical emergency that has been around for decades.[1] It is well studied among most of medical specialties, however, due to it’s variable and nonspecific presentation many patients are often misdiagnosed, thus, many case goes undiagnosed and it’s difficult to determine the actual incidence of serotonin syndrome. In 2002, more than 7000 cases of Serotonin Syndrome were diagnosed and of those 93 cases were fatal.[2] The use of serotonergic medications continues to be on a rise, thereby, increasing incidence of serotonin syndrome. Serotonin syndrome results from the overactivation of central and peripheral serotonin receptors. Multiple psychiatric, pain, and even few antibiotics medications have an effect on serotonin metabolism and pharmacokinetics, leading to bigger chances of serotonin toxicity. Serotonin syndrome can occur with overdosing on serotonergic drugs as well as drug interactions of medications that have serotonergic properties. In conclusion, healthcare professionals should be oriented with this relatively new route that is widely known to addicts and that might even be misdiagnosed with overdosing. Additionally, it is important to understand the inhalation route and how it differs from other traditional routes (PO, IV, and IM) in pharmacokinetics, duration of symptoms, prognosis, and probably management. Thus, more studies focusing on inhalation route are needed.

No. 55

Encephalitis’ ABCs: Aphasia, Behavioral Changes, and Cognitive Impairment as Long-Term Sequelae of Encephalitis

Poster Presenter: Sabeen Khaliq
Lead Author: Manar Abdelmegeed, M.D., M.P.H.
Co-Authors: Piyushkumar Jani, M.D., Bini Moorthy, M.D., Douglas Michael Burgess, M.D.

SUMMARY:

Encephalitis is an inflammation of brain parenchyma that affects people of all ages but occurs more commonly in children. Worldwide incidence ranges between 3.5 and 7.4 per 100,000 people per year. [1] The etiology of encephalitis includes infectious agents, autoimmune, and metabolic abnormalities. The most common cause is infection, particularly infections involving the herpes simplex virus (HSV). The clinical picture varies but can include fever, cognitive impairment, confusion, aphasia, and sometimes even death. [2] Rapid identification and intervention is crucial since any delay in treatment can impact morbidity and mortality. Our case report presents a previously high functioning male with no past psychiatric history who developed severe cognitive impairment with behavioral impairment following encephalitis. Most studies of viral encephalitis are focused on short-term outcomes but there is a paucity in research about long-term complications. This report highlights the long-term

sequelae of encephalitis especially aphasia and behavioral disturbances.

No. 56

"Just a Pseudo Seizure?": A Case of Psychogenic Status Epilepticus: An Overlook on Complications of Non-Epileptic Seizures

Poster Presenter: Abdullah Bin Mahfodh, M.D.
Lead Author: Manar Abdelmegeed, M.D., M.P.H.
Co-Authors: Waquar Siddiqui, M.D., Nashaat Nessim Boutros, M.D., Maheshkumar Patel, M.D.

SUMMARY:

We describe a case of 30-year-old male with multiple Psychogenic nonepileptic seizure (PNES) episodes who progressed to psychogenic status epilepticus and was subsequently intubated. The diagnosis of PNES can be challenging and requires multidisciplinary workup, including video-electroencephalography studies that will exclude an epileptic seizure. Incidence rates of PNES in the general population are underdiagnosed. The prevalence of PNES ranges between 2 to 33 per 100,000 [1]. Among inpatient population evaluated for epilepsy; 25-40% are diagnosed with PNES. [2] Most cases discussing PNES either focus on differentiating it from epileptic seizure or management. However, data on complications and side effects of PNES is insufficient. PNES is a common, sensitive diagnosis, and might result in a medical emergency as occurred with our patient. This resulted in a concern regarding PNES prognosis and comorbidities, which will be discussed in our case report.

No. 57

Phantom Hallucinations: A Case of Isolated Tactile Hallucinations Associated With PTSD

Poster Presenter: Rohma Khan
Lead Author: Manar Abdelmegeed, M.D., M.P.H.
Co-Authors: Abdullah Bin Mahfodh, M.D., Waquar Siddiqui, M.D., Andrew Kerstein, D.O., Nashaat Nessim Boutros, M.D.

SUMMARY:

Hallucinations can be defined as wakeful sensory experiences of content that are not actually present. They can occur in any of the five sensory modalities. Auditory hallucinations are the most common in schizophrenic patients, followed by visual, tactile, olfactory, and gustatory hallucinations. Tactile hallucinations have been known to occur due to substance use but cases have been reported with stroke, or even medications like antidepressants, prescription stimulants, antihypertensives (propranolol), anti-Parkinson medications, and antiepileptics.[2][3][4]. In this case report, we review a 64-year-old African American male with a past medical history of schizophrenia, cocaine use (in remission), alcohol use (in remission), PTSD (following physical and sexual abuse), and a remote history of ventricular septal defect repair 20 years ago. Our patient reported having tactile hallucinations only limited to his lips, in the form of "kisses". He denied having any auditory or visual hallucinations. UDS on admission was negative for cocaine, amphetamines, PCP and blood alcohol level was also negative. At the time of this writing, patient has been hospitalized for 3 weeks, and the tactile hallucinations have been persistent despite monthly intramuscular injections of Paliperidone. He has been on Haloperidol and Risperidone in the past; both were not effective. In this case, we discuss isolated tactile hallucinations. There has been evidence that severe PTSD can be associated with tactile hallucinations, second only to auditory hallucinations in prevalence [1]. Tactile hallucinations are usually followed by an immediate twitch, so there may be a connection between these hallucinations and an excessive startle response (hypervigilance) seen in PTSD. Tactile hallucinations are a rare phenomenon and poorly studied; thus, further research is needed.

No. 58

Hypertensive Encephalopathy Following Electroconvulsive Therapy: A Rare but Serious Side Effect

Poster Presenter: Waquar Siddiqui, M.D.
Lead Author: Manar Abdelmegeed, M.D., M.P.H.
Co-Authors: Andrew Kerstein, D.O., Nashaat Nessim Boutros, M.D.

SUMMARY:

Electroconvulsive therapy (ECT) is a widely used treatment modality which uses a small electric current to induce a generalized cerebral seizure. It is considered one of the most effective and safest

treatments for severe depression. ECT is also indicated for patients with bipolar disorder, schizophrenia, schizoaffective disorder, catatonia, and neuroleptic malignant syndrome. Worldwide, it has been estimated that about one million patients receive ECT annually [1]. Side effects include anterograde and retrograde amnesia, aspiration pneumonia, fractures, dental and tongue injuries, headaches, and nausea. Mortality rate for ECT is estimated to be 1 per 10,000 patients or 1 per 80,000 treatments.[2] Rarely, there have been reports of patients suffering from uncontrolled hypertension post ECT sessions. We present a case of a 74-year-old Caucasian male with a past medical history of severe major depressive disorder, hypertension (HTN), and a remote history of viral encephalitis in 2004 who suffered from Hypertensive Encephalopathy post ECT. Patient did not have any previous history of seizures, traumatic brain injury (TBI), or family history of seizures. Computed tomography head done after ECT did not show any acute abnormalities. The ECT was administered through seizure induction with immediate postictal state. Later, patient woke up and blood pressure was normalized. In a few minutes, his blood pressure rose and SBP reached 220, he became unresponsive to painful stimuli, and had to be intubated subsequently. Video Electroencephalography (VEEG) on the same day showed generalized sowing of delta frequency with intervals of arousal suggesting deep, midline subcortical dysfunction, corresponding to encephalopathy. There have been only a few reported case of HTN encephalopathy post ECT. There is a need to increase awareness of this rare but potentially life threatening complication post ECT.

No. 59

Safe Discharges: The Aftermath of Stabilization

Poster Presenter: Natalie Andrea Seminario, M.D.

SUMMARY:

We present the case of a 21 year old African American male with Bipolar 1 disorder, substance use disorder, and homelessness.

No. 60

Tassy Say, Tassy Do: Eviction of Hallucinations

Poster Presenter: Natalie Andrea Seminario, M.D.

SUMMARY:

We present the case of a 39 year old African American woman with schizophrenia who reports that she is inhabited by a woman named “Tassy”. The patient has a long history of psychiatric admissions, previous placement at the state hospital, and poor treatment adherence, despite access to treatment and residential programs. On this admission, the patient was found screaming and crying on the side of the road and required assistance from police to deescalate and transport her to the psychiatric inpatient unit. The patient was withdrawn and only responded to internal stimuli, ignoring our initial attempts to approach and speak with her. After 2 days of witnessed adherence to psychotropic medications, the patient became more organized and divulged her delusion that she had a woman named “Tassy” living inside of her, speaking to her, and “advising her”. This patient reported that “Tassy” advised her that her family and the treatment team were against her and wanted her “to stink”; thus refusing communication with or help from family. The patient refused all medications, food and water from the treatment team for many days due to the delusion that ingestion of any kind would lead to her ‘stinking’, which she was afraid of and was her chief concern. Our initial non-pharmacological approach consisted of supportive therapy, listening to anything she wanted to share, and giving her the space she asked for and needed. While her paranoia created many initial barriers in our therapeutic relationship, it was clear that addressing it was the key to successful treatment. Her paranoia-built walls began to come down with medication, consistent supportive interviewing, and empathy in dealing with the patients needs. In the span of 1 week, the patient confided how involved “Tassy” was in all aspects of her decision making. “Tassy’s comments and constant presence was distressful for the patient which lead to her increased paranoia and resistance to treatment. Adjusting to her needs and slowly modifying behaviors resulted in positive outcomes for this patient. The etiology of schizophrenia is multifactorial, just as the symptomatology is and treatment of schizophrenia needs to be. Studies show in acutely psychotic patients, non-pharmacological approaches result in more

successful longterm outcomes when implemented in addition to pharmacological treatment. It is important to remember that while these patients are not experiencing reality, their experiences are real and distress; they not only require, but deserve attention. Patient care is improved when addressing all the stressors, even when they are not real to us.

No. 61
Somatic Delusions: Addressing Delusions
Poster Presenter: Natalie Andrea Seminario, M.D.

SUMMARY:
We present the case of a 63 year old Caucasian woman with the diagnosis of schizophrenia who has multiple, intense somatic delusions

No. 62
Bizarre and Fecal
Poster Presenter: Natalie Andrea Seminario, M.D.

SUMMARY:
We present the case of a 52 year old Hispanic woman who presented with exacerbation of schizophrenic symptoms

No. 63
Gabapentin Abuse: Prevalence and All-Cause or Drug-Related Medical Events With and Without Concomitant Opioid Abuse
Poster Presenter: Alyssa M. Peckham

SUMMARY:
Background: Despite international calls to make gabapentin a controlled substance, studies of gabapentin use/abuse patterns are limited to small/high-risk samples and adverse event reports. As such, gabapentin may be abused to potentiate opioid effects, though studies of medical events resulting from co-abused gabapentin/opioids are lacking. The primary objectives were to conduct a systematic assessment of the abuse potential/prevalence of gabapentin in a large sample, and assess patient harm, defined as use of inpatient hospital (IPH) or emergency department (ED) services, associated with overuse of gabapentin with or without concomitant overuse of opioids. Methods: Data were from the Truven Health MarketScan Commercial Claims and Encounters database, for the years 2013-2015. For prevalence assessment, patients with =2 claims for =1 abusable drugs and =12 months' continuous enrollment were sampled for Lorenz curve analysis. Prevalence analysis was limited to those with =120 days of therapy. Abuse potential was measured as Lorenz-1 (consumption of drug supply by top 1% of users) of 15%. Dose thresholds were morphine milligram equivalent (MME) standards for opioids, and maximum labeled doses in milligrams (mg) for other drugs. For medical events assessment, patients with =2 claims (billed encounters) and =120 days of treatment with gabapentin and/or opioids were included. Cohort identification was based on daily-dosage thresholds of 50 MME and 3,600 mg of gabapentin in a 12-month follow-up: (1) no overuse; (2) mild overuse (=2 claims or =2 calendar quarters over threshold); and (3) sustained overuse (=3 over-threshold calendar quarters). IPH and ED use were measured for 6 months after the first overuse date (cohorts 2 and 3) or a randomly assigned date (cohort 1). Logistic regression analyses controlled for pretreatment IPH/ED utilization, indication, addiction diagnosis, concomitant sedative/hypnotic use, and demographics. Results: Lorenz-1 values were 37% opioids, 19% gabapentin, 15% pregabalin, 14% alprazolam, and 13% zolpidem. The top 1% gabapentin users filled prescriptions for a mean (median) 11,274 (9,534) mg/day, =3 times the recommended maximum (3,600 mg). Of these, one-quarter used or diverted 12,822 mg/day. The top 1% opioid and pregabalin users filled prescriptions for a mean (median) 180 (127) MMEs and 2,474 (2,219) mg/day, respectively. Of patients using opioids+gabapentin simultaneously, 24% had =3 claims exceeding the dose threshold within 12 months. All-cause and drug-related IPH/ED utilization increased monotonically with degree of overuse, particularly of more than one medication. Sustained overuse of gabapentin multiplied odds of all-cause IPH by 1.366 [95% confidence interval (CI) 1.055, 1.769], drug-related IPH by 1.440 (95% CI 1.010, 2.053), and IPH/ED for altered mental status (e.g., euphoria, anxiety) by 1.864 (95% CI 1.324, 2.624). Sustained overuse of both medications quadrupled odds of all-cause IPH, drug-related IPH, a

No. 64
Gabapentin Abuse: U.S. State-Level Mitigation

Policies and Need for Federal Pharmacovigilance
Poster Presenter: Alyssa M. Peckham

SUMMARY:
Background: Over the past decade, increased prescription supply has facilitated an epidemic of nonmedical use of controlled substances: predominantly opioids, as well as benzodiazepines, z-hypnotics, and stimulants. More recently, misuse of non-controlled medications, such as gabapentin, has been detected. Gabapentin misuse has been associated with drug-related harm and increased healthcare service utilization in several studies, including a recent large-sample analysis of commercially insured enrollees in the United States (U.S.) Although gabapentin is not considered a controlled substance by the U.S. Drug Enforcement Agency, states have the option to place more stringent criteria on its use, which may include Prescription Drug Monitoring Program (PDMP) reporting, reclassification of schedule status, or other restrictions on dispensing. Methods: To determine how individual states are responding to emerging evidence regarding gabapentin misuse, we investigated state-level policies using Web searches and follow-up telephone contacts. Web searches were conducted using the name of each state, coupled with the following search terms: PDMP, prescription monitoring program, gabapentin, controlled substance, schedule IV, schedule V, and schedule substance list. Telephone contacts were made to persons identified in the Web searches, and followed up with additional persons as needed. Results: States have begun to adopt legal and regulatory strategies to mitigate gabapentin abuse (Figure). Among the most stringent criteria are those adopted by Kentucky and Washington DC, which reclassified gabapentin to a Schedule-V controlled substance and mandated PDMP reporting of gabapentin, and Massachusetts which has classified gabapentin as Schedule-VI. Less stringent policies were adopted by Minnesota, Nebraska, North Dakota, Ohio, Virginia, West Virginia, and Wyoming, which implemented PDMP monitoring for gabapentin without reclassifying it as a controlled substance. Additional regulatory action may be forthcoming in Hawaii, Kansas, New Hampshire, New Jersey, and Pennsylvania, which have discussed gabapentin regulation at various levels but had not made any regulatory changes as of December 2017. Conclusion: Gabapentin represents an opportunistic prescription drug of abuse, given its modest cost and non-schedule status. Thus, it is critical that healthcare personnel become familiar with the prevalence of gabapentin abuse and misuse and the resulting potential for medical harm, adverse societal consequences, and economic burden. Absent a comprehensive federal policy, state-level restrictions may result in unintentional harms: (1) encouraging

No. 65
Motor and Vocal Tics as a Prodrome to Psychotic Illness: A Case Report
Poster Presenter: Adam Hubert Schindzielorz, M.D.

SUMMARY:
Schizophrenia is relatively common, occurring in 1% of the population and is often highly impairing to its sufferers. Thereby, it is of the utmost importance to be able to recognize and treat this disorder as early as possible. For the last several decades research has attempted to elucidate a variety of markers or predictive factors in order to aid in the identification of patients at high risk of developing a schizophrenia spectrum disorder. One such factor that has been studied are premorbid or prodromal movement disorders. Currently the literature has identified clear motor aberrations early in life, in some cases beginning in infancy; these have ranged from infantile hypotonicity to increased facial and upper body dyskinesias, as was seen in our patient. Many of the aforementioned changes are noted to develop very early on in the patient's course. We present a case of a 34-year-old male who developed a persistent motor and vocal tic disorder roughly 4 years prior to the development of schizophrenia with symptoms having continued throughout the course of his illness. The majority of the reviewed literature identifies movement disorders as beginning in adolescence with eventual development of a psychotic illness, however our case is unique it that demonstrates an individual with no known motor symptoms until adulthood with rapid development of psychotic symptoms thereafter.

No. 66

Folie à Deux in Identical Twins in an Immigrant Family and Review of Literature

Poster Presenter: Aditya Kumar Singh Pawar, M.D.
Co-Authors: Mitali Patnaik, M.D., Umair Akhtar

SUMMARY:
Folie a deux is a rare syndrome first described by Lasegue and Falret in 1877. It refers to sharing of delusional beliefs between two individuals either simultaneously or "induced" by one to the other. It is often seen in first degree relatives. Literature inconsistently suggests improvement with separation of individuals. Ms. A and Ms. B are 20 years old identical twin sisters who presented to the emergency room brought by family members on an involuntary commitment. Ms. A had a history of outpatient treatment for oppositional defiant disorder for past 6 years and had been non-adherent to treatment. Ms. B had no prior psychiatric history. For past few days both of them had been excessively aggressive towards family members, exhibiting homicidal threats and physically attacking them On mental status examination both appeared disheveled, had pressured speech, angry mood and affect, with persecutory delusion towards family members, accusing them of being from a different culture, and not understanding them. They believed family was trying to poison them and became agitated when this was challenged. Patients denied any hallucinations though family members reported that patients were seen talking to themselves. Insight and judgment were poor. They were examined separately by two psychiatrists in the emergency department and were admitted on different units. Risperidone 1mg PO was initiated which they refused to take. It was observed that Ms. A was more disorganized and paranoid. They partly improved with reduction in aggression and they stopped any homicidal ideation, though still exhibiting paranoia. They were discharged from the mental health court. Ms. B agreed to follow up outpatient, while Ms. A refused it, family members believed they could persuade her to follow-up. The above cases illustrate the presentation and fulfill the proposed criteria for folie a deux of close association between patients, of having identical delusional content, and that they should share and support each other's delusions. Since one of the patients had prior psychiatric history and appeared to be more disorganized it appears that she is the primary inducer. This is also supported by her continued refusal for treatment while the other patient agreed which may suggest development of partial insight. These cases also show how genetically related individuals may exhibit such shared vulnerability under psychosocial stress of being raised in an immigrant family with possible identity conflicts. Shared psychosis between twins has also been rarely described. Difficulty in separating vulnerable twins has been shown to even result in late onset psychosis. Separation of cases on the units may have served as a factor in initiating improvement of one patient's symptoms, but as the symptoms did not completely resolve over the short stay it can only be expected that they improve with outpatient therapy.

No. 67

It's Not Possible! A Case Report of a Rare Skin Disorder Coexisting With Schizophrenia

Poster Presenter: Alicia Tsai
Co-Author: Davin A. Agustines, D.O.

SUMMARY:
There is very little literature on the co-existence of albinism and schizophrenia. A PubMed search resulted with the last-known article published in 1989. Oculocutaneous albinism is a rare skin disorder, which occurs in 0.005% of the world population. At one point, it was hypothesized for schizophrenia to be impossible to occur with albinism (Greiner & Nicolson, 1965). We review past literature and theories about the coexistence of albinism and schizophrenia and also discuss what implications this case may have toward beginning to understand whether or not the two disorders may be genetically linked. Previous research has identified a schizophrenia-linked translocation breakpoint region on chromosome 11. Based on probable functional role and breakpoint proximity, four candidate genes for schizophrenia were identified-- one of which being tyrosinase, the lack of which causes albinism (Semple, Devon, Le Hellard, & Porteous, 2001). While the exact genetic cause of schizophrenia is still unknown, further research is encouraged to investigate the relationship between albinism and schizophrenia. We present a case report of a 25-year-old African-American male with oculocutaneous albinism type 2 (OCA2) and

schizophrenia. He was hospitalized after his mother discovered the existence of a BB that was lodged in his forehead from a failed suicide attempt in response to command auditory hallucinations. The BB was removed during his hospitalization, and he was psychiatrically stabilized on a combination of Risperdal, Lithium, and Lexapro. We will discuss this rare condition and its potential to be linked with schizophrenia.

No. 68
Advanced Paternal Age as Risk Factor for Schizophrenia in Offspring
Poster Presenter: Alina Babar
Co-Authors: Eric Michael Ewing, M.D., Pronoy Roy

SUMMARY:
M.S., a 20-year-old Hispanic man with a history of substance use and no major previous psychiatric history, was brought into the ED by his mother with the complaint of hearing voices and feeling paranoid for 1 week. The patient believed that strangers were watching him from outside his windows and that people could get into his mind. The patient had begun isolating himself from others and stated he had been feeling increasingly unsafe. The patient's mother stated that M.S. had been hiding a baseball bat behind his door for protection. M.S. denied regularly using marijuana or other substances. He denied any family history of Schizophrenia or other psychiatric conditions, and he denied previous similar episodes. However, the patient revealed that he was stressed for the past year because his father had passed away at the age of 93. The patient's father was 73-years-old when he was born, and at the age of 20-years-old, the patient showed signs of Schizophrenia. He was admitted to the inpatient unit for stabilization. The patient was initially isolative and said he felt depressed, but with medication and appropriate titration, his symptoms began to improve. After observation and management of the patient's symptoms for several months, he was officially diagnosed with Schizophrenia. Although the exact etiology of Schizophrenia spectrum disorder is not completely understood, there is a strong genetic predisposition associated with this condition. With this case, we hope to look at advanced paternal age as a risk factor for Schizophrenia. This association can be explained by examining male germ cell development and de novo mutations. The effects of advanced paternal age on the health outcomes for offspring may become more evident over time as parenthood is being delayed in many societies. Further analysis of advanced paternal age as a risk factor for Schizophrenia could provide us with the ability to mark specific genes as candidates for this disorder.

No. 69
Treatment Considerations in First-Episode Psychosis
Poster Presenter: Anand Satiani, M.D., M.B.A.
Co-Author: Walter Stearns, M.D.

SUMMARY:
Mr. Z is a 20-year-old male with no prior treatment history who, over the course of 3 months, developed a marked delusional system revolving around the Trump Administration and apocalyptic-type delusions. After attempting to convince his family to move to Argentina for their safety, he was transported to the ER and admitted for psychiatric stabilization. Mr. Z was diagnosed with schizophreniform disorder, treated with risperidone titrated up to 6 mg in a matter of two weeks, and discharged. He demonstrated fair improvement in his psychosis but developed notable apathy and dysphoria, both of which he had never experienced previously, as well as prominent sexual side effects. He was subsequently readmitted two weeks later for suicidal thoughts, which had had never experienced previously. Escitalopram was added and risperidone was cross-titrated to aripiprazole given side effects. These changes led to a resolution of his dysphoria, apathy, and sexual side effects, and his psychosis continued to improve with more time on antipsychotic medication. This case highlights the need to be mindful about dosing and side effects in first episode psychosis patients as they generally require lower dosing and to be given more time to respond, which they do at higher rates. In addition, this patient population is acutely sensitive to the dopamine blocking effect of antipsychotics with regards to side effects. This case also highlights the need to seriously consider use of a partial D2 agonist at the initial stage of treatment, which frequently is bypassed out of concern for decreased efficacy and slower response time.

No. 70

Complete Bilateral Self-Enucleation: A Case Report

Poster Presenter: Arindam Chakrabarty, M.D.
Co-Authors: Mariyah Z. Hussain, M.B.B.S., Ashima Datey Chakrabarty, M.D., Eric Black

SUMMARY:

Ms. X, a 25-year-old Caucasian female with a past history of schizophrenia, an inmate at a correctional facility for the past year presented to the ER with bilateral self-enucleation. Per reports she was usually reclusive to her room and hardly talked to anyone at the facility until an escape attempt she made 5 days prior to presentation, completely against her usual behavior. On the night prior to admission, a guard found her staring out of her cell calmly with missing eyeballs. She had gouged out both her eyeballs with her bare hands, and was brought to the ER. The eye-globes were brought on ice in a bag to the ER and were intact with optic nerve measuring 45mm. She had her eyes bandaged and ophthalmology opined that vision could not be saved and planned for cosmetic surgery. At presentation in the ER she rated her pain as mild despite the severity of the trauma. The patient had been incarcerated for stabbing her son and had been under psychiatric treatment in the facility. At the time of psychiatric evaluation, she was laying shackled to the bed. She was in 4-point restraints as she kept attempting to scratch at the bandages on her eyes. Earlier she had tried to rip out her intravenous drip when she was in 2-point restraints. She was extremely guarded and gave very few responses. The responses she gave were suggestive of a religious theme with her saying she was in 'Hell' and then later stating she was in 'Heaven' in response to orientation questions. She barely spoke and seemed internally preoccupied. She did not seem to realize the consequences of her action, as she kept wondering why she could not see. The patient continued to attempt self-harm, despite being in restraints, by trying to bite off her tongue. A mouth guard had to be placed to prevent further injury and psychiatric evaluation was completed over the course of her hospital stay. She was started on olanzapine while she was treated by the ophthalmology team in the hospital. The patient was later transferred to a forensic psychiatric facility for long-term treatment with antipsychotic medications. Self-inflicted eye injuries are rare and have been associated with a variety of psychiatric and organic disorders. There are multiple references to enucleation in mythology with the story of Oedipus being one of the most commonly known. Numerous psychodynamic theories exist to explain self-inflicted eye injuries as a form of self-mutilation. Biochemical theories have implicated serotonergic, dopaminergic and opioid pain pathways. Treatment requires close cooperation between psychiatrists and ophthalmologists as well as physicians, neurologists, and neurosurgeons when necessary. Management also often includes collaboration with forensic teams as these injuries are often seen in the prison setting. In this poster, we discuss the different suggested theories, the clinical characteristics and the challenges faced in the management of these patients.

No. 71

Anosognosia in Schizophrenia: Neurobiological Correlates,Treatment Considerations and Prognosis

Poster Presenter: Ashaki Martin, M.D.
Co-Authors: Luisa S. Gonzalez, M.D., Modupe Ebunoluwa James, M.D., Abbas Naqvi, Katya Frischer, M.D.

SUMMARY:

Anosognosia is the denial of illness or failure to appreciate one's deficits. Anosognosia is a common manifestation in Schizophrenia with a prevalence of approximately 60%. Numerous individuals diagnosed with Schizophrenia, lack awareness of and fail to recognize the signs, symptoms and consequences of their illness. This level of unawareness poses significant challenges to clinicians, as it is linked to poorer adherence to treatment, frequent hospitalizations, increased risk of relapse and psycho-social difficulties. Currently, limited data exists regarding the treatment of anosognosia as a means of improving outcomes in Schizophrenia. In this poster, we discuss the barriers to effective treatment of a 49 yr old African American female with Chronic Schizophrenia, noncompliance with psychotropic medications, more than twenty (20) previous psychiatric hospitalizations who presents at baseline with severe lack of insight into her condition. This poster will also explore the

underlying neurological understanding of anosognosia in medical and psychiatric illness. In addition, it aims to highlight the need to use specific modalities of treatment for insight enhancement, as an integral factor in the management of patients with Schizophrenia towards positively impacting their overall quality of life.,

No. 72

Paranoia on My Mind: Exploring the Many Meanings of Paranoia in Clinical and Forensic Decision-Making

Poster Presenter: Rami Abukamil, M.D.
Co-Author: Christopher Paul Marett, M.D., M.P.H.

SUMMARY:
The many colloquial and scientific conceptualizations of paranoia can lead to confusion regarding its meaning. This can adversely affect the accuracy of clinical and legal decisions based on mental state. Accurate diagnosis and appropriate education about the context of paranoia is critical to guide treatment and to avoid pigeonholing individuals based on the label of paranoia alone. When miscommunication about this term occurs, patients may receive improper care, unnecessary stigma, and legal entities may make erroneous decisions. This poster presents three case examples highlighting the importance of distinguishing the origins and characteristics of paranoia and how it can affect subsequent medical and legal decisions. Case 1 examines the treatment of Mr. A, a man who was afraid to leave his apartment because he was "worried that something was going to happen." His treatment team explored a label of "paranoid" to this thought and behavior pattern, and it affected the course of his treatment. Case 2 describes an evaluation for civil commitment of a "paranoid" patient who had served in the military and had great mistrust for the government. Case 3 explores "paranoid" thoughts in a hospitalized patient who needed surgery. While performing a capacity assessment, the psychiatry consult team explored Mr. C's attitudes about why he "did not want them doing experiments on me" and why he believed "they are trying to kill me!" Through these case examples, we examine the meaning and context of paranoia in different situations. Our poster will also propose ways to classify paranoia appropriately based on dimensions of neurobiology, neurocognition, psychodynamics, and nosology. This classification scheme serves to elucidate clinical and forensic decision making.

No. 73

A Probable Case of Cycloid Psychosis

Poster Presenter: Bruce D. Fox, M.D.
Co-Author: Sarayu Vasan, M.D., M.P.H.

SUMMARY:
Introduction: Karl Kleist is who coined the term "cycloid psychosis" in 1926, referring to cases of acute onset psychosis with recovery period between recurrences. The cases did not meet criteria for schizophrenia, bipolar disorder or depressive disorder. The course of the disorder is episodic as in bipolar disorder however; the acute symptoms are psychotic in nature, as in schizophrenia (Yadav, 2010). Cycloid psychosis, as described by Leonhard, is defined as endogenous psychosis which is neither a mood disorder nor schizophrenia. He further categorized the diagnosis into three classes-motility psychosis, confusion psychosis, and anxiety-blissfulness psychosis (Leonhard, 1961). In 1982, Brockington and Perris published the diagnostic guidelines for cycloid psychosis and considered the diagnosis as a separate entity reporting the condition did not equal schizoaffective disorder despite the high prevalence of mood symptoms (Perris et al., 1982). Case: The authors present a case study of cycloid psychosis in a 50-year-old Hispanic female with minimal functional impairment between her episodes. This case report intends to value the concept of cycloid psychosis emphasizing its importance as it is often neglected in literature and in clinical practice. Discussion and Conclusion: With the onset of the operational diagnostic criteria, the nosological validity of cycloid psychosis was in question due to the similarities present between previously classified mental disorders. Speculations arose challenging whether cycloid psychosis is its own entity or on a spectrum between Schizophrenia and Bipolar Disorder. Further, ICD - 10 recognizes "acute and transient psychotic disorder" and DSM - V "schizophreniform disorder" and "brief psychotic disorder", both accounting for acute psychotic syndromes currently defined in the accepted classification systems, making the differentiation of

cycloid psychosis a concern. However cycloid psychosis maintains distinct differences, which supports the theory that this should be categorized as its own disorder. Despite the accumulated evidence suggesting that cycloid psychosis is a separate class, the DSM V fails to mention the disorder as a separate diagnostic criterion. The case report demonstrates the significance of the diagnosis given its distinctive prognosis and management when compared to other psychoses. This disorder is not well described and is worthy of additional research and scientific attention.

No. 74

Cabergoline Associated With First-Episode, Treatment-Refractory, Schizophrenia-Like Psychosis in a Woman With Hyperprolactinemia

Poster Presenter: Christopher Richard Green, M.D.

SUMMARY:

Cabergoline is a primarily D2 receptor agonist that can cross the blood brain barrier and has been associated with rapidly resolving psychosis in a few case reports. This is a report on a case of a 46-year-old woman, employed as an administrative assistant without any significant prior psychiatric history, with early menopause, who developed a treatment refractory schizophrenia-like syndrome. She had been treated for hyperprolactinemia, likely due to a microprolactinoma, for 9 months prior to admission. She presented with paranoid delusions and auditory hallucinations for 2 months, and was found to have a disorganized thought process and blunted affect. Extensive workup, including bloodwork, lumbar puncture, video EEG, and brain MRI did not reveal another medical cause of her psychosis. She failed to respond to several antipsychotic regimens, or 7 treatments of ECT, over 14 weeks of inpatient treatment. She has been referred to a state psychiatric hospital. This is the first case report of cabergoline associated psychosis that did not rapidly resolve, either on its own or with brief treatment. Her course may have been affected by especially high risk factors. Her brother had a history of schizophrenia and she was going through early menopause, representing a low estrogen state, which epidemiologically has been associated with a second wave of schizophrenia development. In conclusion, there may be irreversible psychiatric reactions to cabergoline. It may be useful to consider individual risk factors when starting dopamine receptor modifying medications and to further investigate dopamine agonists that do not cross the blood brain barrier.

No. 75

Psychostimulant Administration for Cognitive Functioning in Schizophrenia: Two Cases With Positive Outcomes

Poster Presenter: Christopher Cho, M.D.
Lead Author: Rimal B. Bera, M.D.
Co-Author: Joshua Daniel Goh, M.D.

SUMMARY:

Schizophrenia is a highly heterogeneous disorder with a relatively constant clinical phenotype involving cognitive deficits and positive and negative symptoms. While pharmacological developments have shown notable effects on positive symptoms, antipsychotic medications have demonstrated modest or little to no significant effect on cognitive deficits or negative symptoms associated with schizophrenia. As such, these debilitating features of schizophrenia are with limited treatment options. Earlier studies have suggested that central nervous system stimulant medications may have a small effect on improving negative symptoms and cognitive deficits. We will be discussing two cases of chronic schizophrenia, both male and in their 60s and with cognitive impairments, who were started on stimulant medications in conjunction with their antipsychotic medications. As these two patient reside in a residential treatment center, we have been able to closely observe improvements in their cognition and ability to participate in activities and ability to complete tasks. In addition, Cognitive testing (CPT and WAIS-VI) performed before and after initiation of the stimulant reveal objective improvements in patients' cognition and ability to complete the tests. This could add additional evidence that adding a psychostimulant to a schizophrenia medication regimen may be of possible benefit.

No. 76

Is It Delirium, Myxedema Madness, or Hallucinogen Intoxication? Medical and Psychiatric Complications in Treating Persistent Psychosis

Poster Presenter: Dave Peyok, D.O.
Co-Author: Kimberlee V. Wilson, D.O.

SUMMARY:
Ms. D. is a 26-year-old single, Caucasian female with known Schizophrenia, hypothyroidism and polysubstance abuse, (alcohol, cannabis, methamphetamine, benzodiazepine, nicotine) readmitted to inpatient psychiatry for acute psychosis and non-compliance with court-ordered psychiatric treatment. The patient was escorted by law enforcement as a danger to others after an alleged assault at home toward family members with weapons. She had failed to participate with her ACT team and had not appeared for medication appointments nor the REMS-required laboratory testing for clozapine therapy. She presented floridly disorganized with loosely associated thought, extremely aggressive and impulsive behavior but often euphoric in mood and frequent gesturing, posturing and verbally responding to internal stimuli. Her appearance was bizarre; with an unevenly shaved head, she had attempted to shave herself, and inappropriately worn clothing and footwear. Initially she was unable to perform complete ADLs, would not shower for weeks and had frequent urinary/fecal incontinence. Due to her impaired insight and judgment, and non-compliance with blood draws, her treatment began with both immediate acting intramuscular injections and oral antipsychotics other than clozapine, with a goal to stabilize on a long acting injectable formulation. Multiple second-generation antipsychotics were minimally effective, and due to poor response, it appeared her baseline functioning was permanently declined. Discussions for discharge planning began with the focus on long-term residential placement. Throughout this admission, the patient continued refusal of all laboratory testing, as it was suspected she feared illegal substances might be found. During the second month of her admission collateral information was obtained from family that the patient had consumed an entire sheet of Lysergic acid diethylamide (100 hits) at one time. Because her behavior was consistent with hallucinogen intoxication, Pimavanserin was considered as treatment to combat the serotonin overload associated with LSD psychosis. Prior to insurance authorization of Pimavanserin, Ms. D. consented to laboratory studies. She was found to have urosepsis and hypothyroidism. After treatment with antibiotics and levothyroxine her delirious behaviors waned. As her insight and cooperation improved, she was able to resume treatment with clozapine. Over the course of clozapine titration the patient responded successfully again and was allowed to be discharged back to her family home. In this poster, we discuss the importance of differentiating psychotic symptom etiology through obtaining complete, accurate, and reliable information on every patient, and to include substance use and medical histories in an objective and non-judgmental manner.

No. 77
The Brain Drain: A Review of Mitochondrial Changes Associated With Neural Dysfunction in Schizophrenia
Poster Presenter: David Arthur Aguilar, M.D.

SUMMARY:
The Brain Drain – A Review of Mitochondrial Changes Associated with Neural Dysfunction in Schizophrenia David Arthur-Aguilar, MD1, Eduardo J Rodriguez-Perez, MD1, Brian Ladds, MD1 1Lincoln Medical Center, Bronx, New York, United States Background Schizophrenia (SZ) is associated with abnormal mitochondria in postmortem and stem-cell studies. Mitochondrial diseases often present with neuropsychiatric symptoms, leading authors to suggest a mitochondrial inheritance pattern of SZ. The molecular link between mitochondria and SZ pathology has been investigated through the Disrupted-in-Schizophrenia-1 (DISC-1) gene and its protein products. Here we review the relevance of DISC-1 to mitochondrial function, and its possible connections to SZ pathology. Methods We conducted a PubMed search for review articles and original research with titles containing combinations of mitochondria AND schizophrenia OR DISC-1. 101 articles were identified. Exclusion criteria (e.g. Non-English, >10 years old) resulted in the 20 articles reviewed here. Discussion DISC-1 mutation and altered gene products impact mitochondrial functions. Specifically, DISC-1 alterations result in impaired mitochondrial trafficking, fusion, fission, and altered interface with endoplasmic reticulum. This leads to altered bioenergetics, calcium homeostasis, and management of oxidative stress.

These impaired cellular processes can lead to abnormal neuronal development and death, which has been implicated in SZ. Conclusions Dysfunctional molecular pathways are involved in the disease process of SZ. DISC-1 shines a light on the multiple ways that mitochondrial dysfunction could contribute to SZ, and the potential role of mitochondrial inheritance in SZ.

No. 78

A Allele in 196G/a of the BDNF Gene Polymorphisms May Predict Suicidal Behavior in Schizophrenia Patients

Poster Presenter: Eun Jeong Kim
Co-Author: Yong-Ku Kim

SUMMARY:
Background: Brain-derived neurotrophic factor (BDNF), mediates neuronal survival, differentiation, synaptic plasticity. Its relation with etiology of schizophrenia has been studied most recently. Because BDNF modulates dopaminergic and serotonergic pathways and Hypothalamic-pituitary-adrenal (HPA) axis regulation, it has been suggested that it has possible neurobiologic impact on etiology of schizophrenia. We hypothesized that the specific allele or the genotype such as three SNPs, 196G/A (rs6265), 11757G/C(rs16917204), and 270C/T(rs56164415) is associated with schizophrenia. Furthermore, discovering any relationship of specific clinical variables with specific allele or genotype distribution will help manage the patients. We also examined different alleles or genotypes and their impacts on clinical variables, including the severity of symptoms, the previous history of suicide attempts, the number of admissions or duration of disease. Methods: 241 normal controls and 157 schizophrenia patients are included as participants. To evaluate severity of patients' symptoms, Positive And Negative Syndrome Scale(PANSS), Brief Psychiatric Rating Scale(BPRS), and Korean version of the Calgary Depression Scale for Schizophrenia (K-CDSS) were assessed. Demographic data and past personal history of patients, including family history of psychiatric disorders and previous suicide attempts, were collected. The differences in allele or genotype distribution for the patients and normal controls were analyzed by using ?2- test. We also analyzed differences in demographic or clinical variables depending on genotype or allele differences in each SNPs. We analyzed the data using independent t-test and ANOVA to compare clinical variables. Results: We found no significant difference in genotype or allele distributions of three studied SNPs between the patient group and the control group. For clinical variables, PANSS, BPRS, and K-CDSS of each allele or genotype showed no difference among groups. However, history of suicide attempt was relatively higher in patients with genotype A/A, G/A compared to patients with genotype G/G for 196G/A. Conclusions: Our results suggest no specific allele or genotype can predict the susceptibility of schizophrenia in studied SNPs. Still, our results suggest that it is possible to use BDNF gene allele and genotype as a predictor for suicide attempt in schizophrenia patients. The rate of suicide attempt in schizophrenia patients is as high as that in major mood disorders patients. Regarding this, our results can help manage the patient with schizophrenia in order to reduce mortality. We can also assume that the BDNF gene polymorphism is related with specific symptom entities rather than disease itself. Further research with larger population and various ethnicity subjects is needed to confirm our current study result.

No. 79

Compulsory Outpatient Treatment: Who Are the Patients Who Are Transitioned to Voluntary Treatment?

Poster Presenter: João Oliveira
Co-Authors: Gonçalo Sobreira, Zita Gameiro, Sofia Brissos

SUMMARY:
Objective: Data regarding compulsory outpatient treatment (COT) effectiveness remains inconsistent. We describe and compare the characteristics of patients followed in a specialized COT consultation who were transitioned to voluntary regimen, and of those who were maintained on that regimen on the last observation. Methods: Naturalistic, longitudinal analysis, of 30 patients divided in two groups: those whom in the last evaluation transitioned to voluntary regimen (n=7), and those maintained in COT (n=23), evaluated with the Positive and Negative Syndrome Scale (PANSS), Personal and

Social Performance Scale (PSP), Berrios-Markova and Scale to Assess Unawareness in Mental Disorder (SUMD), and Trails A and B. Results: Patients transitioned to voluntary regimen were followed for less time, i.e. a mean of 6 vs. 9 months, and improved significantly on all PANSS subscales, as compared to patients maintained on COT who improved significantly on positive symptoms only. Improvement in personal and social functioning and in objective insight was more marked in patients transitioned to voluntary regimen. Regarding cognitive performance, only patients transitioned to voluntary regimen showed significant improvements in a measure of processing speed (Trail-A). Conclusions: A sub-set of patients seems to improve while on COT in symptoms, personal and social functioning, objective insight, and cognition, and can be then transitioned to voluntary regimen. More studies are needed to understand the possible benefits of psychiatric COT.

No. 80

Repetitive Transient Psychotic Episodes Associated With Tonsillitis

Poster Presenter: João Oliveira
Co-Authors: Cátia Alves Moreira, Gonçalo Sobreira, Sofia Brissos

SUMMARY:
INTRODUCTION There is increasing interest in the role of the immune system in psychotic disorders. Upper respiratory infections, specifically, have been associated with mental illness. Whether they represent a risk factor for mental disorder or the other way around is not clear, and the possible mechanisms for that association are still unknown. We present the case of a patient with three acute transient psychotic episodes (ICD-10 F23), each following an episode of tonsillitis, and discuss the plausibility of such association with a brief review of literature. METHODS Case report and narrative literature review of the PubMed database. CASE REPORT A 47-year-old male patient was admitted to a psychiatric inpatient unit following a sudden episode of agitation, persecutory delusions and visual hallucinations with less than 24h evolution. There were no significant changes in mood, attention and consciousness, or negative symptoms. He presented slightly elevated white blood cell count and C Reactive Protein (CRP) which were attributed to agitation. Toxic screening was negative and the head CT-scan was unremarkable. He began treatment with antipsychotics (APs), and attained remission/resolution in 4 days; the white blood cell count and CRP increased during the first days of inpatient care, despite the patient being no longer agitated, but normalized shortly thereafter. On reviewing the patient's clinical file, we found that he had had two previous similar episodes, both starting few hours after the diagnosis of tonsillitis and completely clearing a few days after antibiotic and AP initiation. The patient had been completely asymptomatic for over ten years without APs. He was discharged and AP treatment was slowly withdrawn after 6 months; two years later, the patient remained symptom free. DISCUSSION The immune system may be involved in psychotic disorders in several ways. Microglia, specifically, seem to be partly responsible for pathological pruning and the negative and cognitive symptoms of schizophrenia. However, the association of inflammation with positive symptoms is less clear and may not be related to microglial profile but to a cross-reactive auto-immune response. Regarding upper respiratory tract infections, we found only four cases in the literature of a possible causal link with psychotic symptoms (unrelated to Sydenham chorea, PANDAS or adverse effects of medication). No possible cross-reaction target has yet been identified. CONCLUSION Although the role of the immune system in negative and cognitive symptoms of schizophrenia is increasingly recognized, there are reports to build a case for the possibility of a causal connection between respiratory tract infections and acute psychosis in vulnerable patients which warrants further research efforts to identify which patients may not require chronic treatment with AP.

No. 81

Dissociation in PTSD and in the Courts: A Literature Review

Poster Presenter: Alyssa Beda
Co-Author: Eindra Khin Khin, M.D.

SUMMARY:
Dissociation is a polarizing clinical phenomenon among psychiatrists. The phenomenon has been described in Dissociative Identity Disorder (DID),

Post-Traumatic Syndrome Disorder (PTSD), dissociative amnesia, and other trauma-related experiences, yet much of the existing literature and legal basis of a dissociation criminal defense surrounds that of DID. This study will examine the manifestation of dissociation in various clinical contexts and how these are viewed in the eyes of the law. Another complicating matter to address is the distinguishing points between the dissociation phenomenon, unconsciousness, and alcohol induced "blackouts," all of which have different legal standings. The literature review demonstrates that amnesia and dissociation have been associated with violent crimes propagated by a wide variety of people, including veterans, college students, psychiatric patients, and domestic violence perpetrators. Acts of violence during a dissociative state have been associated with a lack of planning and premeditation, increased emotional states, emotional ties to the victim, and alcohol use. However, alcoholic blackouts and substance do not qualify in the criteria for dissociative disorders. There is considerable controversy concerning amnesia for offenses, along with the basis of amnesia itself. In States vs. Stevens, it was determined that amnesia is not a bar to prosecution of an otherwise competent defendant. On the other hand, even before PTSD was first described as an official diagnosis in DSM-III, traumatic stress syndromes were successfully offered as bases for criminal defenses. Various PTSD phenomena presented in courts as criminal defenses included dissociative flashbacks, hyperarousal symptoms, and survivor's guilt; however, dissociate flashbacks may be the most plausible defense. The diagnosis of PTSD has served in insanity defenses, unconsciousness defenses, and even as self-defense. Unlike other dissociative disorders, PTSD has been consistently shown to meet the Daubert Standard, thus deemed reliable and admissible in court. The proposed characteristics of authentic PTSD dissociation observed with criminal acts include a sense of a motive or explanation for the crime, lack of premeditation, similarities between the circumstances of the crime and the trauma causing PTSD, a random or fortuitous victim, and no criminal history. The aim in this analysis is to shine a light on clinical nuances involved in the dissociative phenomenon, and how they can take on varying paths within legal matters. In this process, important legal concepts such as Daubert Standard and M'Naghten Rule are reviewed. Based on our literature review, of all the dissociative phenomena recorded in the DSM and applied to a court of law, PTSD with dissociation appears to most likely to hold up as a criminal defense.

No. 82

Quadruple Hazards of Methamphetamine Psychosis, Delusional Identification Syndrome, Violence, and Competency to Stand Trial: A Forensic Case Report

Poster Presenter: Andrew Sadek
Co-Author: Simon S. Chiu, M.D., Ph.D.

SUMMARY:

RB, a 31-year single male of Caucasian decent of no fixed address, presented to the emergency department of a urban hospital with visual and auditory hallucinations. He was highly agitated and panicky in describing his visual experiences: he was "seeing many family members" whom he recognized from his familiar "dope houses" in the downtown area. He complained of excruciating pain related to his training for the marathon event in order to escape from many people." He was somewhat confused and bewildered in his report of "seeing his family members in the emergency room." He has had repeated emergency visits related directed to his substances of abuse. He preferred to snort or to inject Crystal Meth: methamphetamine (Meth), despite the medical complications of rhadomyolysis and hepatitis C. His preferred substance of abuse switched from opiates: hydromorphone to Meth about 1 year ago. He switched from his heavy opiate use to Meth while he received methadone maintenance. He endorsed grandiose and paranoid delusions a involving his fear of being poisoned by arsenic. He claimed he worked for the federal agents. During his hospitalizations, he became highly belligerent and hostile accusing staff of conspiring against him. He was totally convinced that his parents came from" two different Asian countries, and that he "came through the wall of China." He held that he had undisclosed connections with the late Kung Fu master in Hong Kong. He was observed to be practicing Kung Fu rituals to defend himself against evil spirits when he was actively

hallucinating. His forensic history included multiple offenses of assaults causing bodily harm, uttering threats and repeated breach of judicial release. He was committed to the forensic psychiatric hospital for his recent episode when he grabbed a female innocent bystander screaming and yelling. He was found to be incompetent to stand trial for his alleged offenses of "utter threats and assault causing body harm." Competency to stand trial was finally restored after a 4-month period of pharmacotherapy involving both depot and oral atypical antipsychotics combined with mood stabilizers/antiepileptic agents. The case report highlights for the first time delusional identification syndrome: variants of Fragoli syndrome and inter-metamorphosis syndrome i as core symptoms of Meth-psychosis and schizophrenia. Recent studies show both schizophrenia and methamphetamine-induced persisting psychosis share similar gene risk genes and neurobiological lesions in the serotonin and dopamine systems. We report for the first time Meth psychosis and neurocognitive impairment sustains violence and identify delusional syndrome. The marginal and slow response to antipsychotics leading to his reversible incompetent to stand trial, can be explained by the neurotoxic effect of Meth. The case report illustrates the controversies regarding the actus reus and mens rea in Meth psychosis and criminality.

No. 83

Risk Assessments After Incidents: How Good Are We?

Poster Presenter: Donna Arya

SUMMARY:

RISK ASSESSMENTS AFTER INCIDENTS: HOW GOOD ARE WE? Dr Jose Romero-Urcelay (Medical Director), West London Mental Health NHS Trust. Dr Ainslie Boyle (Forensic Psychiatry ST4), West London Mental Health NHS Trust. Dr Donna Arya (Forensic Psychiatry ST5), West London Mental Health NHS Trust. Aims: An audit/quality improvement project designed to improve the documentation around risk following serious incidents. This project also strived to improve the timing of documentation following serious incidents. Analysis of the updating of risk assessment tools and the timings of this in relation to serious incidents on the forensic wards. We determined current practice and subsequently made recommendations and suggestions regarding documentation of this. We determined whether risks have been appropriately incorporated into care plans. Method: A random selection of serious incidents on the Forensic Wards (medium and low security) of St Bernard's Hospital was provided to us. A data collection tool was used to obtain information from the risk summaries, HCR-20 and progress notes sections on RiO (electronic records) of inpatients. The data was analysed using Microsoft Excel. Results: 43 incidents were included. 6 incidents were excluded due to the incident not meeting the criteria and one incident was excluded due to data not being made available to us. 60% of incidents were not included in the risk summary of the patient involved. The time taken to update the risk summary ranged from 1-108 days following an incident. No incidents were included on the risk summary on the same day. 72% HCR-20s were not updated following incidents. 21% of care plans did not include the risk behaviour demonstrated during the incident. Conclusions: Risk summaries and HCR-20s were not updated for the majority of incidents looked at. When they were updated they were not done in a timely fashion following an incident for the majority of the time. The majority of patients had a care plan in place at the time of the incident and the majority did include the risk behaviour relevant to the incident. The clinical risk policy section does not explicitly state the time frame in which risk assessments should be updated following incidents. Recommendations will be made about this.

No. 84

Length of Stay in Jail and the Risk of Self-Harm Among Individuals on the Mental Health Service in the New York City Jail System

Poster Presenter: Emily Nash
Co-Authors: Connor Bell, M.P.H., Semmie Kim, M.P.H., Elizabeth B. Ford, M.D.

SUMMARY:

Background: Self-harm poses significant health risks in correctional settings. While psychiatric illness may put individuals at risk for self-harm, the jail environment may also contribute to this risk. Current literature has shown inconclusive findings on the relationship between length of stay (LOS) in

jails and prisons and the risk of self-injury and suicidal behavior. This study seeks to better understand to what extent the risk of self-harm in a jail setting may be influenced by individual factors versus exposure time to jail. Methods: We conducted a retrospective chart review of the electronic health record of the NYC jail population and identified all documented acts of self-harm. We collected data for 58,890 incarcerations of individuals on the mental health service who were admitted to jail between May 1, 2011 and November 29, 2014. We examined the effects of age, race, sex, criminal top charge severity, serious mental illness designation (SMI), and total LOS in jail on self-harm using univariate and multiple logistic regression. Separate logistic regression models were conducted using the solitary confinement variable, since this housing data was only available for those in jail on or after October 1, 2013. Results: SMI, longer LOS, and younger age significantly predicted higher odds of self-harm after controlling for age, sex, race, LOS, SMI, top charge severity, and solitary confinement. The odds of self-harm increased with increasing LOS in a positive dose-dependent relationship. Compared to those in jail for 1 week or less, the odds of self-harm were significantly higher for those in jail for 4-6 months (AOR 11.84, [99% CI 7.19 – 19.49], $p < 0.001$), higher for those in jail for 6-8 months (AOR 13.63, [8.28 – 22.44), $p < 0.001$) and highest for those in jail longer than 8 months (AOR 24.19, [14.88 – 39.32], $p < 0.001$). Those with SMI had significantly higher odds of self-harm (AOR 1.84, [1.59 – 2.13], $p < 0.001$) versus those without an SMI designation. Age and self-harm were significantly negatively associated in a dose-dependent relationship. Compared with those ages 51 and older, the odds of self-harm were significantly higher for individuals ages 22-30 (AOR 7.21, [4.80 – 10.82], $p < 0.001$), even higher for ages 18-21 (AOR 12.42, [8.20 – 18.82], $p < 0.001$), and highest for ages 16-17 (AOR 27.28, [17.69 – 42.07], $p < 0.001$). Conclusion: While SMI status contributes to the risk of self-harm, longer LOS in jail and young age stand out as strong predictors of self-harm in this population of individuals on the mental health service in the NYC jail system. These data add to the literature documenting significant health risks associated with prolonged stays in jail and emphasize particularly the increased risk of self-harm for those with mental health concerns.

No. 85

Behind the Screen: Which Child Pornographers Should We Watch Closely?

Poster Presenter: Gael Fournis
Co-Authors: Jouin Raphaelle, Nidal Nabhan Abou

SUMMARY:

Background: Child pornography is a form of sexual exploitation of children. The advent of new information and communication technologies, especially the Internet, has encouraged wider dissemination. Understanding the phenomenon of child pornography is complex, because it is sometimes a matter of deviance without leading to actual abuse. Thus, the main issue faced by law enforcement agencies is the level of danger posed by consumers of this type of media. Essentially, magistrates must recognize the risk of sexual assault associated with this behavior. Forensic psychiatrists have to give psycho-criminological information to explain the offense and to allow the prosecutor to make appropriate decisions. **Objective:** This study aims to determine the psychopathological and criminological difference between child pornographers and dual offenders who acted out, by analyzing forensic assessments in child pornography cases, and thus identify risk factors for sexual assault within this specific population. **Methods:** We are analyzing the data of 60 forensic reports. We had previously identified items that are related to sexual offenders, and widely criminal risk factors, reported in the literature. Applying this grid of reading, we expect identify items that would stand out in dual offenders population, compared to child pornographers. **Results:** To date, data collection is ongoing. The results are currently analyzed and will be presented. **Discussion:** From a psychopathological point of view, child pornographers appear to be a separate sex offender category, with a subpopulation of sexually-oriented child molesters who use child pornography to feed their fantasies, reinforce their cognitive distortions, or in some cases use them as a substitute. They would thus constitute a separate type of offender with unique risks and needs. Identifying those at risk of assaulting children in this offender population is

essential in order to adjust the recidivism prevention tools and the most appropriate treatment for each case. **Conclusion:** It is important to be able to locate people who use illegal pornography. It seems at least as important to identify among them those who are at risk of sexual assault. Research on the characteristics of child pornography consumers must be pursued in order to better target the risk factors for acting out and provide insights into the most appropriate management of these deviant behaviors.

No. 86

Delusions of Weather Manipulation and Telekinesis in a Case of Folie à Deux

Poster Presenter: Hiran Cardoz, M.D.
Co-Authors: Krishen Persaud, Michael Esang, MB.Ch.B., M.P.H.

SUMMARY:

The most recent update to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, removes shared psychotic disorder as a separate disease entity and includes it under other specified schizophrenic spectrum and other psychotic disorders. There it is described as "delusional symptoms in partner of individual with delusional disorder." [1] We present a case supporting this distinction, where a couple shared a delusion. Ms. S, a 27-year-old Chinese American female with a history of cannabinoid and alcohol use disorder and no other formal psychiatric history other than self-cutting since high school, presented to the emergency room under police arrest after destroying property at her rental home. She tested positive for cannabinoids on urine toxicology and admitted to almost daily cannabinoid use for two years prior to presentation. Upon evaluation, Ms. S was a poor historian secondary to disorganized thought process and notable thought blocking. She endorsed command auditory hallucinations to destroy rental owner's property in an effort to harm her for treating patient like patient's mother does. She attested to smoking marijuana on the night of the incident. During her evaluation she disclosed that she and her husband possess the power to manipulate the weather, move objects, predict and control people's travel behavior, and operate phone applications without physical contact. She also believed husband and Norma Jean are Jesus Christ because of their soul and spirituality. She was admitted to inpatient Psychiatry and husband called the unit to inform the treatment team that she had been having auditory hallucinations for two years. He then confirmed a shared delusion stating that they can affect the weather, she can affect people's behavior, and that it is a possibility he is Jesus. The patient was started on Risperidone and responded to titration. The treatment team met with her husband to discuss discharge planning, which included follow up with a dual-focus treatment program. The patient was subsequently discharged home to husband on Risperidone 2 mg orally every 12 hours. This case provides an opportunity to examine the nosology of shared psychotic disorder, its evolution as a disease concept, and the importance of a careful and culturally-sensitive risk assessment in such presentations.

No. 87

Treating Addiction in Jail: A Vivitrol Trial With a Cohort of Inmates

Poster Presenter: Jessica Bayner, M.D.
Co-Authors: Kelly E. Uwoghiren, M.D., Asghar Hossain, M.D., Javeria Sahib Din, Madia Majeed, M.D.

SUMMARY:

The prevalence of substance use disorders in the Unites States was most recently documented to affect 20.5 Americans 12 years of age or older, constituting of two million opioid prescription pill users. The resulting increase in mortality, crime and the impact on the healthcare system makes opioid dependence a substantially important issue. Moreover, the number of prisoners in the country with opioid dependence has significantly risen over time. The World Health Organization has recognized the need to to address the matter, and advised to start treating inmates prior to their release, in an effort to avoid relapse or death. The treatments that are offered in jails are varied, and policies differ in each facility. Currently available pharmacotherapeutic options for opioid dependence are opioid agonists, partial agonists, alpha-2 agonists, and opioid antagonists, the latter of which includes Vivitrol. Vivitrol is a long-acting depot formulation of naltrexone, an antagonist at the

opioid receptor. It is well tolerated, and has been approved by the FDA for the prevention of relapse to opioid and alcohol dependence. Vivitrol is injected on a monthly basis, which facilitates compliance in comparison to oral alternatives. However, many who would benefit from the medication do not have access to it, or do not receive multiple doses as recommended. This may be due to limitation of Vivitrol's availability, with respect to complications with insurance coverage, and prescribers' possible lack of familiarity with the medication. Other factors include patients' motivation to remain abstinent and utilize resources to help in their recovery. Our proposed project entails conducting research in a jail which has been approved to administer Vivitrol to their inmates. The population will be prisoners undergoing care in the jail's voluntary acute inpatient drug program, who will be given the option of receiving Vivitrol in the course of their treatment. Questionnaires will be distributed amongst the inmates, which will identify their drug of choice (opioid versus alcohol), and inquire about their willingness to start taking Vivitrol. Those who opt out of getting Vivitrol will be used as a control group. The inmates who choose to receive the injection will be asked whether they intend to continue getting it after being released from jail. We will follow up with the patients who were surveyed after several months, and ask about their cravings, rates of relapse, compliance, and any difficulties they encounter with the medication. The data will be analyzed to determine the efficacy of Vivitrol when offered in a jail setting. The results will add greater insight into the management of addiction and its intersection with forensics. This will be of value in addressing the clinical challenge of opioid dependence among incarcerated patients, which may also be applied to providing care for the community-at-large.

No. 88

Not Guilty by Reason of Insanity: Now What?

Poster Presenter: Jessica Bayner, M.D.

SUMMARY:

The importance of providing quality and ethical care to psychiatric patients is unquestionable. However, there are instances in which policies are not updated to address mental health concerns for those in need of treatment, which also affect the greater population. Such an example is outlined in case of a patient living in New Jersey who became linked with a community hospital's outpatient clinic. A Hispanic male in his 30s, the patient was on KROL status, signifying that he was once arrested for various charges and ultimately deemed "Not Guilty by Reason of Insanity" (NGRI). As a result, he was mandated to undergo mental health treatment for 11 years, after he was evaluated and diagnosed with Schizoaffective Disorder. This was in lieu of serving time in jail, as is the case with others who are on KROL status (due to the Supreme Court of New Jersey's ruling in State v. KROL in 1975). KROL patients must appear for scheduled court hearings, at which point the Judge, Prosecution and Defense attorneys assess how often the patient needs to be monitored and when the next hearing should take place. In an effort to address to need for better monitoring of such patients, the writer sent a letter to the State Senator's office to request for more resources to better track such patients. Just as people who get released from jail have probation officers, it would behoove the community-at-large to have better monitoring of those under KROL status. After communicating with various county officials, it became apparent that there is a lot of fragmentation in the system that creates a gap through which many are liable to fall. For example, conflicts were revealed that exist between the Criminal Division of Superior Court and civil commitment hearings, when patients' were not tracked properly and resources were being burdened. The writer met with representatives from the County Prosecutor's Office, the County Adjustor, the County's Health and Human Services Center, and administration from the community hospital. All parties agreed that better collaboration was needed for the management of such NGRI patients. A proposal has since been made to create an accessible database to allow authorized entities to track KROL status individuals. Suggestions as to what to include are: details about the patients' scheduled hearing, their assigned Attorneys, names of the providers, and contact information of the specific Judge who is to be notified if the patient becomes noncompliant. The efficacy of such a database will be assessed and if successful, may serve as a model that can be implemented in other parts of the State. Further development of resources

may also lead to the creation of an official monitoring program for such patients to help them navigate the healthcare system as a whole. The mentally ill and the incarcerated are both underserved populations and as such, deserve advocacy to ensure proper treatment.

No. 89

The Use of Stimulants in Hoarding Disorder Comorbid With Depression: A Case Study

Poster Presenter: Dae Kim
Co-Authors: Aos Salah Mohammed Ameen, M.D., Nikhil Pillai, Panagiota Korenis, M.D.

SUMMARY:
Hoarding disorder (HD) is characterized by both a collection of excess items resulting in clutter and a difficulty in discarding excess items, causing significant impairment. Obsessive-compulsive disorder (OCD) is defined as recurrent and intrusive thoughts causing marked distress accompanied with repetitive compulsions. Hoarding disorder was classified as a subtype of OCD, until recently. HD is thought to differ from OCD as a defect in neurocognitive functioning such attention and nonverbal memory as well as in neural activity demonstrated by f-MRI. The prevalence of HD ranges from approximately 1.5% to 6% and first line treatment is often cognitive behavioral therapy (CBT). Mood disorders are often present with HD and OCD, with Major depressive disorder (MDD) as one of the most common co morbidities. There is no official recommendation for pharmacotherapy for HD, but some studies suggest reduction of the symptoms with SRIs, stimulants, or SRI augmentation in patients diagnosed with OCD with hoarding symptoms. Furthermore, studies suggest, depression not responding to first line treatment can be augmented with stimulants such as Methylphenidate. In this report, we explore the case of a 66-year-old Caucasian Male who was admitted to our inpatient psychiatric unit for major depressive disorder with suicidal ideation and co-morbid HD. He was treated with Sertraline for MDD. During his stay, his treatment was augmented with methylphenidate and a significant improvement in his symptoms was noted. This case report aims to support the notion that treatment of depression comorbid with HD can be augmented with stimulants. Furthermore, we aim to add to the medical literature of HD and the use of pharmacotherapy

No. 90

Moving to the Rhythm: A Rare Case of Obsessive-Compulsive Disorder

Poster Presenter: Geetha Chandrashekar, M.D.
Co-Authors: Meelie Bordoloi, M.D., David M. Ash, M.D., Garima Singh, M.D.

SUMMARY:
A 16yo female presented to the Autism clinic with her family saying, “she has a sway and really has to have music in her life”. This behavior caused her significant anxiety and stress. She had been bullied at school due to her compulsions. There was one time where her hair was cut and glue was poured in her hair. The urge to sway back and forth occurred with all types of music. In the presence of music, she even swayed while walking. Initially, she was able to control swaying in a public setting like restaurant but the urge continued to build up and create so much anxiety to a point where she had to leave the place early. She felt embarrassed about this behavior and it significantly limited her social functioning. Eventually she began to avoid going to places. She spent about two hours in a day swaying in her room to music. Music was played during the evaluation and after about 30 seconds, she was in visible distress from trying to control swaying. She denied history of seizures. She denied any symptoms of psychosis. On assessment, ASD was ruled out as patient did not have any deficits in social emotional reciprocity, non-verbal communication or developing or maintaining relationships. She was started on Sertraline 25mg daily and symptoms improved significantly. Intrusive musical imagery (IMI) is characterized by involuntary recollection of short, looping fragments of melodies, which can be triggered by exposure to any form of music. While for most people, IMI is not aversive, people who do experience distress and functional impairment, meet criteria for OCD. Musical obsessions are described as recurrent episodes of IMI that are persistent, intrusive, unintentional, and causing significant distress and functional impairment. Musical obsessions are often under-diagnosed because of limitations in assessment methods or mis-diagnosed as psychotic phenomena, and hence treated

ineffectively. It differs from musical hallucinations, in that, it is a form of imagery that the person recognizes as originating from his or her mind, and occurs in people who do not suffer from hearing disorder, seizures, delirium, psychosis, dissociative disorders, drug induced states or hypnagogic states. Like with other types of OCDs, musical obsessions are also accompanied by fear, compensatory or avoidance behaviors. It is suggested that these patients are most likely to benefit from SSRIs, clomipramine, CBT, exposure/response prevention, and distraction-based treatments.

No. 91

Mindfulness Based Cognitive Therapy for Obsessive-Compulsive Disorder: A Pilot Study

Poster Presenter: Yongjun Chen
Lead Author: Lu Lu
Co-Authors: Tianran Zhang, Jianyu Wang, Qing Fan, Haiyin Zhang, Fabrizio Didonna

SUMMARY:

Objective: Obsessive-Compulsive Disorder is a kind of mental disease which can cause pain and affect social function seriously. Mindfulness based cognitive therapy(MBCT) has been applied to the therapy and rehabilitation of various mental diseases as 'the third wave of cognitive behavior therapy'. As a pilot study, the study aims at exploring the curative effect and the mechanism of action of MBCT for OCD combining quantitive and qualitative study. Method: 12 mild to moderate Chinese OCD patients meeting DSM-? diagnosis who were recruited through Shanghai Mental Health Center were divided into 2 groups, accepting clinic treatment with MBCT. Each group conducted by 2 psychotherapists who have been trained of MBCT. There are 11 sessions in 10 weeks of MBCT for OCD with a length of 150 minutes in the nine sessions, 90 minutes in the third session with family members and 7.5 hours in the eleventh session, which were held at weekly in an outpatient setting. The primary outcome measure is Yale-Brown Obsessive-Compulsive Scale(Y-BOCS) and the Five Facet Mindfulness Questionnaire(FFMQ), the secondary outcome measures are Hamilton Anxiety Scale(HAMA) and Hamilton Depression Scale-24(HAMD24). All assessments were performed at baseline, mid-treatment (week 4), at the end of treatment (week 10). The process was recorded by observers, and each patient had a half-one hour interview before and after the treatment. Result: The result of quantitive research: compared with the baseline, patients got significantly lower total scores of Y-BOCS ($F = 4.594$, $P < 0.05$, effect size = 0.338), and the score of obsessive thought was reduced significantly ($F = 5.473$, $P < 0.05$), the score of obsessive behavior was not changed significantly. The patients had lower difference values of the HAMD scores ($F = 11.799$, $P < 0.01$) and the HAMA scores ($F = 7.442$, $P < 0.01$). The score of FFMQ was not changed significantly, including the aspects of observing, describing, non-judging and non-reacting, but the aspect of acting with awareness increased significantly ($F = 7.057$, $P < 0.05$). The results of qualitative research: group members believe that the beneficial factors of treatment mainly were the pleasure of communication, emotional support and practice guidance to the thoughts, the negative factors were the practice of mindfulness cannot be applied to their own specific obsessive-compulsive symptoms. Conclusion: (1) The effect of MBCT on the reduction of obsessive-compulsive symptoms and (2) the improvement of anxiety and depression has a significant effect, (3) the effect of obsessive-compulsive thinking is more significant, (4) The improvement of acting with awareness is the main development of the level of mindfulness. (5) The curative effect of MBCTfor OCD is mainly from correcting the thoughts and improving the awareness of the symptoms. This study laid the foundation for the next large sample of randomized controlled trials. Project supported by the National Natural Science Foundation of China (No. 81771460), Sub-project of Shanghai Science and Technology Committee "scientific and technological innovation action plan " of science and technology support projects in the medicine and agricultural field (No. 15411950203), Collaborative innovation research project in translational medicine of Shanghai Jiaotong University School of Medicine (No. TM201614), Scientific Project from Shanghai Health Bureau (No. 201740086), Shanghai Jiao Tong University supported by"the Fundamental Research Funds for the Central Universities" (No. 16JXRZ12).

No. 92

Manualized Group Cognitive Behavior Therapy (CBT) for Obsessive-Compulsive Disorder (OCD):

Delivery to an Uninsured Community Population
Poster Presenter: Robert Clay Peterson, D.O.

SUMMARY:
Background: Cognitive-behavioral therapy (CBT) with exposure and response prevention (ERP) has been shown to be one of the most effective treatments for patients with obsessive compulsive disorder. Group Behavioral Therapy (GBT) is comparable to individualized therapy in treatment response rates. Despite this, there are few studies that evaluate CBT / ERP within a group model that allow for generalizability, particularly in an outpatient community setting. We proposed to implement an evidence based, manualized 12-week CBT group for OCD with clearly-defined goals and structure at the Adult Outpatient Psychiatric Clinic (AOPC) at LAC + USC Medical Center. Methods: Ten AOPC adult (age 31 – 79, 50% male) subjects with low socioeconomic status and OCD (diagnosed via DSMV criteria and Structured Clinical Interview OCD Module) were recruited. Twelve closed 60 minute groups were held weekly with co-investigators following the treatment manual, GBT for OCD (Van Noppen et al., 1997). Subjects were administered the Yale Brown Obsessive Compulsive Scale (YBOCS), Beck Depression Inventory (BDI), and the Beck Anxiety Inventory (BAI) at baseline, after session 6, and at the conclusion of the final group. A 10-question satisfaction survey was administered at the conclusion of the study. Results: Eight subjects averaged over 80% attendance during the study whereas 2 individuals were present less than 50% of the time and were thus excluded due to insufficient data. Overall, decreased values in participants' YBOCS, BAI, and BDI scores were observed and no participants reported worsening of OCD symptoms. Mean baseline YBOCS, BAI, and BDI scores were 25, 23.3, and 24 respectively, and 20.9, 21.8, and 16.5 respectively at the conclusion of the group. These scores yielded mean YBOCS, BAI, and BDI score reductions of 4.1, 0.5, and 5 points respectively, and median score reductions 2.5, 4, and 7 points respectively. Mean survey satisfaction scores (on a 1 – 5 point scale): group atmosphere (5), program helpfulness (4.9), program quality (4.9), therapist satisfaction (4.9), likeliness to recommend to a friend (4.9), treatment modality (4.8), educational material (4.6), exposure exercises (4.6), program length (4.3), comfort treating self individually following group (3.4). Conclusion: These results suggest that group based CBT / ERP is an effective treatment in a community setting as evidenced by the overall reductions in outcomes scores and high satisfaction by participants. The added benefits of GBT being a cost-effective, and less time-intensive treatment than individual therapy with further advantages of group cohesion and modeling make this a potentially valuable treatment modality in the community setting. Replication and further data analysis is needed to generalize these findings with a larger sample size and a control group.

No. 93
The Research of Interaction Between Inhibition Function and Emotion in Obsessive-Compulsive Disorder in China
Poster Presenter: Rui Gao

SUMMARY:
Objective: This research adopted Scale Assessment, emotion stroop task and expression inhibition task to study the inhibition function, emotion and their interaction of OCD.Methods: 30 OCD qualified with enter criteria were selected, and 30 health controls(HC) matched with OCD in gender, age and education were selected from advertising. Several scales and experiments were made on OCD and HC including general situation questionnaire, Y-BOCS, Y-BOCS-SC, HAMA, HAMD, BIS/BAS, emotion stroop task and expression inhibition task. Using SPSS to deal with the statistics. Results: 1. Scores of Y-BOCS, subscale of obsessions and subscale of compulsive behaviors of OCD were significantly higher than those of HC ($p=0.000$) . Scores of HAMA and HAMD on OCD were significantly higher than HC ($p=0.000$). Scores on the BIS subscale of OCD were significantly lower than HC ($p<0.05$). There was positive correlation between Y-BOCS and HAMA ($r=0.596$, $p<0.01$), Y-BOCS and HAMD ($r=0.522$, $p<0.01$). There was negative correlation between Y-BOCS and BIS ($r=-0.378$, $p<0.01$). There was positive correlation between HAMD and HAMA ($r=0.882$, $p<0.01$), and there was negative correlation between HAMD and BIS ($r=-0.319$, $p<0.05$). 2. Compared with HC, the reaction time was significantly higher in OCD ($F=855.06$, $p=0.000$). There was no difference among different kinds of emotional words in OCD ($F=0.391$,

p=0.759). There was no difference on accuracy between OCD and HC (F=0.414, p=0.520). There was a positive correlation between Y-BOCS and reaction time (r=0.104, p<0.01). 3. By analyzing the ratings of OCD and HC in different situations (inhibition, non-inhibition), this study found that the main effect of situation was significant (F=41.534, p=0.000), no difference was found between two groups (F=2.417, p=0.12) and the main effect of category of pictures was significant (F=612.708, p=0.000). In the non-inhibition part, there was no significant difference between OCD and HC (F=0.460, p=0.498). In the inhibition part, there was significant difference between OCD and HC (F=4.778, p=0.029), especially on negative pictures. There was a negative correlation between Y-BOCS and ratings (r=-0.138, p<0.01).Conclusions: 1. There was a inhibition deficit in OCD. Compared with HC, OCD had more anxiety and depression feelings. There was a significant negative correlation between depression and inhibition function. 2. Compared with HC, the inhibition of emotional words was poorer in OCD, however, there was no significant difference among all emotions. There was a positive correlation between the severity of OCD and reaction time. 3. OCD can regulate their positive, negative and neutral emotions by expression inhibition. Compared with HC, OCD had more powerful inhibition on negative emotions. There was a negative correlation between the severity of OCD and ratings.

No. 94

Trichotillomania and Rapunzel Syndrome: A Case Report and Treatment Updates

Poster Presenter: Travis William Jones, M.D.

SUMMARY:

Trichotillomania, the compulsive urge to pull one's hair, can have a crippling effect on a patient's life. Ten percent of these patients go on to develop trichophagia, the compulsive eating of hair. In this case report, a 12-year old female presented to the ER with four days of abdominal pain, nausea, and vomiting. CT scan soon showed the presence of a small bowel obstruction. When the surgeons inspected the bowel during an exploratory laparotomy, they found the presence of a trichobezoar, or a mass of hair that had caused the small bowel obstruction. Rapunzel Syndrome is when a trichobezoar is found that extends from the gastric body beyond the pylorus into the duodenum. The Psychiatry Consult-Liaison team was consulted to provide further guidance. This patient was found to have started eating hair from a young age. When the patient was seven years old, the mother of the patient shaved the patient's head. After this, the patient allegedly stopped her hair picking and consumption. The patient denied eating hair since age seven and no bald spots were noted on the patient's head. Father of the patient noted that the patient recently started undergoing puberty and had demonstrated some oppositional behavior but he had not noticed the patient eating any hair. No other obsessive-compulsive symptoms were found on exam, and the patient had never sought psychiatric care before. The patient was offered an appointment in the Child and Adolescent Behavioral Health Clinic, but the parents of the patient refused to seek outpatient care at that time. The patient recovered from the operation and was discharged from the hospital. Given the presence of the large trichobezoar found during surgery, this patient was most likely still suffering from trichotillomania. This disorder is found in the Obsessive-Compulsive and Related Disorders category of the DSM-V. Although cognitive behavioral therapy is proven effective for trichotillomania, there is no clear proven first-line pharmacological agent. Mood stabilizers like lamotrigine and lithium have shown some effectiveness. One could also consider fluvoxamine, commonly used in obsessive-convulsive disorder. There has even been some effectiveness with N-acetylcysteine, and over-the-counter product. Other medications researched include methylphenidate, topiramate, valproic acid, naltrexone, olanzapine, and aripiprazole. This case report will examine the latest research in treatments for trichotillomania along with recent discoveries in pathophysiology, with the hope of aiding clinicians in treating the disorder to prevent the life-threatening Rapunzel Syndrome.

No. 95

Developing a Measure to Assess Beliefs More Systematically: The Results of a Pilot Study of the Nepean Belief Scale (NBS)

Poster Presenter: Vlasios Brakoulias

SUMMARY:

Abstract Background: Abnormal beliefs are a central feature of several psychiatric disorders, e.g. persecutory beliefs in psychotic and borderline disorders, beliefs surrounding contamination in obsessive-compulsive disorder (OCD), and beliefs about body image in anorexia nervosa and body dysmorphic disorder (BDD). Assessing beliefs has not always been systematic in the literature with characteristics of beliefs such as conviction, strength, insight and fixity often used very loosely. DSM5 has attempted to improve the description of insight in several disorders (OCD, BDD, hoarding disorder) by introducing more detailed insight specifiers, i.e. good or fair insight, poor insight, or absent insight/delusional beliefs. Methods: The Nepean Belief Scale (NBS) was specifically designed to improve the consistency with which belief characteristics are assessed. The NBS was evaluated for interrater reliability, internal consistency, divergent and convergent validity and test re-test reliability in a pilot study involving two clinicians and 27 participants with OCD related beliefs. Results: There are benefits to clearly defining primary beliefs using prompts that encourage specific details and more precise definitions of belief characteristics. The 5-item NBS has an assessment time of less than 5 minutes. The interrater reliability was highly concordant (99.5%). Cronbach alpha coefficient for internal consistency was 0.87. The NBS was found to have excellent convergent and discriminant validity and the kappa for test-retest reliability was 0.98 (95% CI = 0.95 to 1.00). Conclusion: Preliminary data indicates that belief can be more effectively assessed using instruments with more clearly defined characteristics, such as the NBS. Although the NBS was assessed in participants with OCD, it may have wider utility in assessing beliefs associated with other obsessive-compulsive related disorders, somatic symptom disorders and psychotic disorders. This study was supported by grants from the Nepean Medical Research Foundation, the Pfizer Neuroscience Grant scheme and The University of Sydney.

No. 96

Obsessive-Compulsive Disorder in a 19-year-old adolescent with Turner Syndrome

Poster Presenter: Surinder Moonga

SUMMARY:

Obsessive-Compulsive Disorder (OCD) in patients with Turner syndrome (TS) 45,X monosomy is an uncommon neuropsychiatric presentation that has not been well characterized in the scientific literature. Though no clear psychiatric component is syndromic to TS, the clinical manifestations of certain neuropsychiatric disorders, including mood, anxiety and eating disorders, have all been well documented in patients with TS. However, the presence of OCD in these patients has not been previously described. This report details a 19-year-old TS patient who presented with OCD since the age of 13, comorbid with several other psychiatric pathologies, including bipolar I disorder, anorexia nervosa and Attention Deficit Hyperactivity Disorder (ADHD). Additionally, this report will discuss those co-morbidities in relation to the patient's genetic syndrome and discuss the contribution it makes to her multiple disabilities diagnosis as well as her patient-specific therapy. Patients with Turner syndrome often present to treating physicians for overwhelming somatic complaints, likely resulting in poor recognition of psychiatric disorders. Thus, OCD may be significantly underdiagnosed in TS patients and should be considered by clinicians treating TS patients who will often only describe somatic systems disorders as their chief complaints. A case report of a TS patient with OCD and the utilized treatment approach is presented here.

No. 97

Posttraumatic Stress Disorder in an Adolescent With Inflammatory Bowel Disease-Related Bowel Surgery

Poster Presenter: Surinder Moonga

SUMMARY:

A fifteen-year-old female with Crohn's disease, diagnosed at age six, presented to the psychiatrist for evaluation of "blackouts". These episodes had been occurring for the previous two years, developing shortly after an ileostomy procedure. These were gradually becoming more frequent and severe. She describes her first episode as follows—"I was sitting at the breakfast table as usual when I suddenly felt myself leave my body, feeling spaced out and unable to talk". Following these episodes,

which would last up-to ten minutes, the patient would return to her baseline. The patient recalled the entire event, saying she had no control over her extremities and could only “see black”. She has had extensive work up for these episodes with negative laboratory findings, brain imaging and multiple video electroencephalograms. On review of her medications, the patient was not on steroids, methotrexate and/or infliximab. She also denied any substance use. Vedolizumab was the only medication taken regularly by the patient during this two-year-period and it was not a recent addition to her regimen. The patient returned to the hospital multiple times for medical evaluation over the next two years and was finally referred for psychiatry evaluation given lack of other explanations for her symptoms. Upon assessment, she described a long history of Crohn’s disease and related stress. After her ileostomy, she began feeling anxious and hyper-aware of her surroundings. Any reminder of her surgery would result in physiological arousal—sweating, “tingling” and abdominal pain. She would avoid looking at her bag, asking her caregivers to change it. She also described flashbacks and nightmares related to her surgery. She denied any past psychiatric history prior to her bowel surgery. Her symptoms persisted even after ileostomy reversal. Given supporting evidence from our patient’s history, diagnosis of PTSD was suspected. For confirmation, the Child PTSD Symptom Scale (CPSS) was administered, with higher scores indicting greater functional impairment. On initial presentation, her part 1 score was 41 (max 51, min 0) and part 2 graded YES 6 NO 1. Symptoms of hypervigilance, avoidance and negative alterations in mood and cognition stood out. She did not meet criteria for any psychiatric disorders other than PTSD. Her symptoms were treated with sertraline, gradually increased to a dose of 100mg, along with cognitive behavioral therapy (CBT). The patient tolerated sertraline well with no reported gastrointestinal side effects. CPSS, administered after two months of treatment revealed a part 1 score of 21 and part 2 graded YES 3 NO 4; signaling significant improvement and remission from PTSD. The patient’s nightmares, hypervigilance and depersonalization symptoms completely resolved. Over six months from initial presentation, the patient remains in remission.

No. 98

Prolonged Grief, Posttraumatic Stress, and Depression Symptoms After Loss: Co-Occurrence, Temporal Relationship and Key Symptoms

Poster Presenter: Manik Djelantik

SUMMARY:

Introduction: Mental health problems following a loss can result in heterogeneous symptomatology that may include symptoms of Prolonged Grief Disorder/Persistent Complex Bereavement Disorder (PGD/PCBD), Post-Traumatic Stress Disorder (PTSD), and Major Depressive Disorder (MDD). The co-occurrence, temporal relationship and the key-symptoms of these three disorders in bereaved individuals are still relatively unexplored. Information about these issues is beneficial in developing new strategies in the care of bereaved individuals. Methods: In the first study, using data from 496 Dutch bereaved persons who filled in questionnaires assessing PGD/PCBD, PTSD and MDD, we conducted a latent class analysis to identify different symptom classes and predictors of classes. In the second study, using data from 204 Dutch bereaved persons, who filled in questionnaires in the first and second year after their loss, we conducted a cross-lagged analysis to examine temporal relationships between PGD/PCBD and PTSD . In the third study, using data from 166 Dutch bereaved individuals, we conducted a latent class analysis to identify classes of bereaved individuals with similar trajectories of PGD symptoms between two time points (resp., 6 months and 18 months). Next, we used Receiver Operating Characteristic (ROC) analysis to examine which early symptoms best predicted membership of the class with a problematic grief trajectory. Results: In the first study, we found three different classes: a resilient class, a PGD class, and a combined PGD/PTSD class. Violent cause of death, loss of a child, and loss of a partner were associated with membership of the combined PGD/PTSD class. In the second study, we found that PGD symptoms may precede PTSD symptoms after bereavement. In the third study, we found two classes with a problematic grief trajectory in adults over the first two years after a loss. Daily endorsement of yearning, feeling stunned, anger and/or feeling that life is empty best predicted

membership of these two classes. Discussion: These three studies increase our understanding of the course and predictors of emotional distress following bereavement. This knowledge can inform the development and refinement of assessment and intervention methods, specifically directed towards vulnerable subgroups of bereaved individuals. Topics: Bereavement, Post Traumatic Stress Disorder, diagnostics. Co-authors: A.A.A.Manik J. Djelantik, MD, Geert E. Smid, MD PhD, Rolf J. Kleber, PhD, Paul A. Boelen, PhD

No. 99

Influence on FKBP5 Polymorphism on Structural Changes and Psychological Symptoms of the Brain in Posttraumatic Stress Disorder

Poster Presenter: Min Jin Jin

Co-Authors: HanNa Seo, HeeJung Jeon, Seung-Hwan Lee

SUMMARY:

FK506-binding protein 51 (FKBP5) is known to be an important modulator of stress responses, and a single nucleotide polymorphism of rs1360780 in the FKPB5 gene is associate with a predisposition to developing post-traumatic stress disorder (PTSD). This study examined the interactive effect of the diagnosis of PTSD and FKBP5 rs1360780 allelic variants on volume changes of the entire brain. Sixty-eight PTSD patients and 63 healthy controls were included. T1-weighted structural magnetic resonance imaging, FKBP% rs1360780 genotyping through blood assessment, and psychological and neuropsychological assessments were administered. The volume of cortical and subcortical regions were analyzed using FreeSurfer and 2x2 ANCOVA was analyzed by SPSS 21.0. Significant interactive effect of genotype-by-diagnosis were observed for the volume of left precentral gyrus, left postcentral gyrus, and left lingual gyrus. The T allele was associated with significant volume reduction in these regions with PTSD patients, whereas T allele was associated with significant volume increase only in left lingual gyrus with healthy controls. The volume of those regions were negatively correlated with social support and positively correlated with rumination and PTSD symptoms only in people without T allele. In contrast, the volume of those regions were negatively correlated with experiential avoidance, positively correlated with social support and PTSD symptoms. Results of this study suggest FKBP5 gene could influence on changes of several brain regions and the psychological characteristic related with brain changes. This study was supported by a grant from the Brain Research Program through the National Research Foundation of Korea (NRF) funded by the Ministry of Science, ICT and Future Planning (NRF-2015M3C7A1028252).

No. 100

Psychiatric and Neurocognitive Consequences of Exposure to Hurricane Katrina and Relocation

Poster Presenter: Phebe Mary Tucker, M.D.

Co-Authors: Christopher Nguyen, Ph.D., William D. Ruwe, Ph.D., Psy.D.

SUMMARY:

Background: Survivors of natural disasters, such as hurricanes, are at risk for mental health sequelae such as post-traumatic stress disorder (PTSD) and depression. A vast body of literature has examined the neurobiological consequences of PTSD and other sequelae from diverse trauma types among combat veterans and civilians. Previous studies from our laboratory revealed the presence of increased pro-inflammatory cytokines among survivors of Hurricane Katrina with PTSD and autonomic reactivity to trauma cues. To expand our understanding of how stress of hurricane exposure affects survivors, we examined its neurocognitive sequelae, to add to the growing literature documenting various decrements in functioning in trauma survivors. Methods: Survivors of Hurricane Katrina and/or ensuing floods relocated to Oklahoma (N = 33; Mean age = 27.2 +/- 12.6 years) were recruited and matched to control participants by age, gender, and years of education (N = 28; Mean age = 25.6 +/- 10.5). All participants completed neurocognitive tests assessing for processing speed (Trail Making Test Part A [TMT-A]), mental flexibility (Trail Making Test Part B [TMT-B]), sustained attention (Conner's Continuous Performance Test - 2 [CPT-2]), and learning and memory (Rey Auditory-Verbal Learning Test [RAVLT]). Symptoms of PTSD were quantified by the Clinician-Administered PTSD Scale (CAPS). The Beck Depression Inventory-II (BDI-II) was used to assess depressive symptomatology. Results: To test for any

mean level differences on the cognitive and affective variables, t-tests were conducted. There were no statistical differences between the participant groups on age, gender, and education. Participants in the survivor group exhibited weaker performance on the TMT-A (t [58] = 2.43, p = .02), TMT-B (t [58] = 2.19, p = .03), and CPT-II response time (t [58] = 2.04, p = .05), but performance was comparable between the two groups on the RAVLT. When comparing scores on the psychometric measures, survivors scored higher on the CAPS (t [59] = 4.41, p = <.001), as well as the BDI-II (t [59] = 4.40, p = <.001). Follow-up univariate analysis of variances among each cognitive variable revealed only a significant main effect on the CPT-II response time, F (1. 37) = 4.871, p = .006. Conclusion: We found significant psychiatric and neurocognitive sequelae among relocated Hurricane Katrina survivors when compared with control participants, such that they exhibited poorer performance on tests of processing speed, sustained attention, and mental flexibility, in addition to higher emotional distress as indicated by measures of PTSD and depression. When controlled for PTSD and depression symptoms, survivors exhibited slower responses on a measure of sustained inattention (an indication of inattentiveness) above and beyond the effects of chronic psychological distress. Results underscore that cognitive problems in addition to neurobiological changes may complicate hurricane survivors' recovery.

No. 101

Evidence-Based, Collaborative Care Model for Treating Chronic Military-Related PTSD: Three Decades of Experience at the Miami VA PTSD Clinic

Poster Presenter: Nils C. Westfall, M.D.
Co-Authors: Samantha B. Saltz, M.D., Mousa Botros, M.D., Rebecca M. Arana, M.D., Daniella David, M.D.

SUMMARY:
Former military personnel are commonly affected by PTSD and they are more frequently and severely affected by it than the general population (1, 2). More than 50% of patients with PTSD have comorbid psychiatric disorders (e.g., mood, anxiety, substance use) (3) and many exhibit maladaptive coping (e.g., avoidance, isolation) and other treatment-interfering behaviors. PTSD and combat-related traumatic stress are independently associated with heightened mortality rates and increased risk of numerous chronic medical conditions (e.g., cardiovascular disease, diabetes) (4). About one-third of all PTSD cases follow a chronic course, though military-related PTSD tends to be more severe, treatment-refractory, and chronic than average and, thus, multimodal, collaborative treatment is often indicated. Our PTSD interdisciplinary clinical team, which is part of a Veterans Affairs network of outpatient clinics specializing in PTSD, provides evidence-based psychotherapy (individual and group) and pharmacotherapy to veterans and other military personnel with chronic PTSD, whether combat- or noncombat-military-related (e.g. military sexual trauma, accidents), to help them optimize symptom management, achieve remission, and improve function in all domains of life. After completing an information session, the diagnostic screening, and orientation, patient-involved decision-making is used to develop a multimodal, collaborative treatment plan integrating the management of comorbid diagnoses, psychosocial stressors, and other important factors. Patient-provider teams may select from a number of different evidence-based individual (i.e., cognitive processing therapy, prolonged exposure, acceptance and commitment therapy for depression, cognitive behavioral therapy for depression and insomnia, and dialectical behavior therapy) and group (e.g., Recovery [various topics], Seeking Safety [substance abuse], military sexual trauma, anger management, CBT for insomnia, cognitive behavioral therapy for depression, mindfulness-focused, Wellness Recovery Action Planning) psychotherapies. All patients are evaluated by a psychiatrist and, if indicated, offered evidence-based pharmacotherapy. Patients with comorbid substance use disorders follow a unique treatment path which integrates therapists and pharmacologists specializing in that area. In the last 16 years, active patient numbers steadily increased from 519 in 2002 to a high of 3,021 in 2014, before decreasing to 2,525 in 2017. Current patients include veterans of every major combat theater since WWII. Of note, psychiatry and psychology trainees have been rotating in the clinic since its inception. Here we present in greater detail this highly successful program that has been improving the lives of

veterans and other military personnel with chronic PTSD and preparing mental health professionals to carry on its vital mission for nearly three decades.

No. 102
WITHDRAWN

No. 103
Prevalence and Demographic Data of Medical Comorbidities Associated With PTSD: A Performance Improvement Project
Poster Presenter: Viviana Ines Chiappetta, M.D.
Co-Authors: Luisa S. Gonzalez, M.D., Panagiota Korenis, M.D., Monica Evelyn Badillo, M.D., Aos Salah Mohammed Ameen, M.D.

SUMMARY:
The past decade of research has provided evidence demonstrating that individuals with posttraumatic stress disorder (PTSD) present with an increased number of health complaints, suffer from more physician-diagnosed medical conditions, and exhibit higher health care utilization. PTSD has been associated with an increased risk for a number of adverse health conditions, including the development of major chronic diseases, such as hypertension, obesity and type 2 diabetes. These conditions represent a significant public health problem that is strongly associated with increased disease burden and mortality. A performance improvement project was conducted on all newly admitted patients over a two month period to our inpatient psychiatry service. We collected baseline data which identified not only the prevalence of PTSD but also the medical comorbidities of our patients. Despite knowing that there is an increased incidence of medical comorbidities in patients with PTSD, it is uncertain how this affects the treatment planning and patient's outcome on the inpatient setting. As such, the identification of potentially modifiable mechanisms linking PTSD and other chronic conditions is needed. Continued research in this area is necessary to help guide prevention and treatment efforts aimed toward reducing morbidity and mortality in those with PTSD.

No. 104
Hurricanes Katrina, Ike, Sandy, Harvey and Irma: Storm-Specific Exposures to Trauma and Loss in Relation to Psychopathology
Poster Presenter: Zelde Espinel, M.D.
Co-Authors: Mackenzie Jones, James Shultz, Taylor Johnson

SUMMARY:
Background. Human population exposure to the hazards associated with five memorable Atlantic Basin hurricanes - Katrina (2005), Ike (2005), Sandy (2012), Harvey (2017) and Irma (2017)– resulted in mortality, psychological distress, and psychopathology. Each of these storms had a distinctive hazard profile. Therefore, the storm-affected populations experienced different types of exposures to physical hazards during impact and adversities in the aftermath. The peer-reviewed research literature regarding the psychological consequences of tropical cyclones striking human populations has been enriched based on well-designed studies conducted with survivors of these powerful storms. Analyses presented here examine the hazard profile of each storm in relation to the storm-specific stressors and the psychiatric outcomes observed. Methods. Historical analyses of National Hurricane Center archival data and storm summaries prepared by expert atmospheric scientists allow us to describe the type, intensity, and duration of hurricane hazards. From these data, a detailed hazard profile is constructed for each storm. The disaster psychology literature is reviewed to create a matrix of psychological stressors associated with human population exposures to tropical cyclones and to identify the salient stressors for each of the five case examples of U.S. hurricanes. The review focuses intensively on the sizeable body of research published on these four storms. Emphasis is placed on identifying prominent psychological stressors associated with the pre-impact warning and preparedness phases (stressors associated with evacuation and sheltering), the impact phase (direct exposures to storm hazards), and the post-impact recovery and reconstruction phases (losses, hardships, and life disruptions). The literature is reviewed to elucidate the psychiatric outcomes in relation to exposures to trauma and loss. Results. Each of these four storms had a unique hazard profile in terms of the exposure of the storm-affected population to wind hazards (hurricane winds, tornadoes) and water hazards (storm surge,

coastal surge, deluging rains, river and overland flooding). In turn, community vulnerabilities and human population exposures to these hurricane hazards yielded different stressor matrices. Psychiatric outcomes; including the types, rates, duration, and severity of psychopathology; relate to each storm's novel constellation of exposures to potentially traumatic hazard events during storm impact and to the life-changing losses and adversities that are experienced following the storm. Conclusions. Each disaster has a unique signature. Even disaster events of similar genre – in this case, each of the five disasters were tropical cyclones originating in a single (Atlantic) hurricane basin within the span of 12 years – may produce markedly different psychiatric outcomes depending upon the complex dynamics of the hazard profile, community vulnerability, and population exposure.

No. 105
WITHDRAWN

No. 106
Amoxicillin-Induced Mania: A Case Report
Poster Presenter: Jordan Harrison Rosen, M.D.

SUMMARY:
Antibiotics are an uncommon but documented (1) caused of both mania and delirium with a case literature detailing the latter more significantly. While the pathophysiology is poorly understood in mania, beta-lactam drugs have a suspected anti-GABA-ergic role in inducing a delirium often characterized by hyperreflexia, myoclonus and seizures. (2) This same mechanism seems a plausible explanation for how these agents could cause mania. In this case, a 54-year-old man was exposed to amoxicillin multiple years apart and developed classic symptoms of mania both times despite no evidence of mood episodes throughout the rest of his life. The second exposure was accompanied by signs of hyperreflexia and left him with persistent symptoms that eventually responded and went into remission with the induction of valproate.

No. 107
Challenges of Medical Clearance Through Clinical Cases
Poster Presenter: Michael Stephen Peroski, D.O.
Co-Authors: Bhinna Pearl Park, M.D., Marissa A. Flaherty, M.D.

SUMMARY:
Medical clearance for psychiatric treatment is the process by which a patient with symptoms presumed to be psychiatric in origin is evaluated for severe medical illness that could preclude their admission to an inpatient psychiatric unit. This process is highly variable, depending on the hospital system, the constraints of the psychiatric unit to which the patient may be admitted, and its presentation in the medical literature. What makes this more challenging is that there does not appear to be a consensus in the literature on how to medically clear a patient for admission to a psychiatric unit. We present three cases in which patients were medically cleared but later were found to have acute medical causes of their psychiatric symptoms or complications to their psychiatric treatment causing transfer off of a psychiatric unit. These cases include a geriatric patient with new delusions subsequently found to have pancreatic cancer; a patient with psychosis subsequently found to have temporal lobe epilepsy; and a patient determined to have severe cellulitis underlying their reported "depressive" symptoms. Careful attention will be paid to the process of medical clearance in these cases and how to generally improve the process of medical clearance. The process of medical clearance at our medical system will be discussed and the literature regarding this process will be reviewed extensively. Attention will be paid to aspects of the process at our institution that are generalizable and aspects of this process that may vary from institution to institution. This process also varies depending on whether the patient is coming from an outside hospital, from an emergency department, or from a medical floor facilitated by consultation liaison psychiatry. Unique aspects of the process within each of these situations will also be discussed. Lastly, we will discuss how existing policies interface with this process, including professional organization recommendations and EMTALA.

No. 108
Health Advocacy and Policy for Residents: A Solution for Resident Burnout?

Poster Presenter: Sabina Rajesh Bera, M.D., M.Sc.

SUMMARY:
Education surrounding health policy and advocacy training has rarely been proposed as a solution for resident burnout, and minimal studies touch on this subject. However, participating in health advocacy may lead to engagement and fulfillment as a member of an effective medical organization. Limited studies have suggested that medical students and residents feel empowered after engaging in advocacy efforts, and one study suggested that the residents surveyed believed health advocacy was core to their training. Residency programs currently do not generally require residents to engage in these activities. To our knowledge, ours is the first study to assess the ease of access by which a resident may learn about advocacy opportunities by specialty. Residents often use mobile devices to communicate and stay connected as well as desktops or laptops while at work, which we incorporated into our study. All major specialty organization websites were examined for the availability and ease of identifying advocacy efforts by the organization, current events affecting their patients, and health advocacy opportunities for residents. This was performed by a pre-medical undergraduate student with no prior exposure to specialty websites. This data was then compared with the available statistics on the rate of resident burnout by specialty. Every major organization's website was found to have a section clearly dedicated to advocacy, and most were found on mobile devices and laptops within 5 seconds. Locating the active advocacy efforts of the majority of organizations were identified in under 60 seconds on both devices, with 6 of 11 organizations mentioning the Affordable Care Act. 8 of out of 11 highlighted information regarding Hurricane Harvey on their homepage. All organizations also had opportunities for resident involvement, which ranged by type. For example, the American Academy of Emergency medicine, Family Medicine, and Neurology were identified to have advocacy opportunities open to all its members, however did not offer any specific programs for only residents. These programs took significant difficulty to find, ranging from twice to 150 times longer. There was no significant difference in identifying information on mobile and laptop devices. It is refreshing to know all organizations have advocacy efforts, however they may consider making health policy education for residents as easily identifiable. We found that residents would have to dedicate up to 5 minutes to locate these opportunities. Although the availability and ease of identifying advocacy efforts does not reveal a corresponding relationship to resident burnout by specialty, it is worth nothing that that the 3 specialties without specific opportunities for residents are in the top 10 specialties that experience the most burnout. In future studies, a more thorough investigation should be taken to examine if residents involved in advocacy activities are less likely to suffer burnout.

No. 109

Seizure Monitoring in Electroconvulsive Treatment

Poster Presenter: Emma Gustafsson
Co-Author: Niclas Bengtsson

SUMMARY:
It is generally agreed that induction of a generalised epileptic seizure is a prerequisite for treatment effects in electroconvulsive treatment. Mostly, seizure quality is evaluated by visual inspection (symmetry of seizure) and observed seizure duration. In this naturalistic follow up study we investigated if a manualized algorithm for seizure quality monitoring could be useful for prediction of outcome and side effects. All patients started on ECT treatment at the University Psychiatric Clinic in Umeå under 2016 were included in the study. ECT treatment was guided by a treatment algorithm (based on patients age and gender) – guiding stimulation strength over the treatment series and change of electrode placement (unilateral versus bilateral) when necessary. The algorithm for seizure quality monitoring included signs of brain-stem activation (rise in heart rate, rise in blood pressure and flushing over chest and face). It also included seizure duration (observed clinically and estimation of epileptic activity on EEG), any deviation from symmetric seizure activity and occurrence of postseizure EEG suppression. A composite index of seizure quality was calculated (0-6). Evaluation of outcome and side effects for the whole ECT series was done by MADRS (Montgomery Åsberg Depression Rating Scale) and the memory difficulty

item of the CPRS (Comprehensive Psychiatric Rating Scale). We also recorded occurrence of confusion between ECT treatments. Possible relations between seizure quality and outcome measures, occurrence of side effects and complications were examined.

No. 110
ECT and Catatonia
Poster Presenter: Krupa Pathak, M.D.
Co-Authors: Fnu Syeda Arshiya Farheen, M.B.B.S., Rajesh R. Tampi, M.D., M.S., Venkatesh Sreeram

SUMMARY:
Introduction: Catatonia is a syndrome of mood dysregulation associated with many different illnesses. The signs of catatonia include posturing, mutism, negativism, rigidity, stupor, cataplexy, waxy flexibility, mannerism, sterotypy, grimacing, agitation, echolalia, and echopraxia. Electroconvulsive therapy (ECT) is a procedure consisting of small electric current passing through the brain inducing a brief seizure used to treat different mental illnesses, including treatment resistant depression, severe mania, and catatonia. Objective: The purpose of this review is to evaluate the efficacy of ECT as a treatment for catatonia due to several conditions (i.e. schizophrenia, depression, medical conditions, etc). Methods: We performed a literature review of Pubmed/Medline and Cochrane library through August 21st, 2017 using the keywords “ECT” and “Catatonia”. The search was not restricted by the age of the patient, or the language of the study. However, in the final analysis, the studies involving patient that were published in English translations were included. In addition, we reviewed the bibliographic databases of published articles for additional studies. Results: The systematic review of literature identified a total of eleven articles of which only four met the inclusion criteria. The first article studied ECT in patients with catatonia and in patients with bipolar disorder. The second article evaluated the short term outcomes of ECT. The third article discussed the effects of various treatments in patients with catatonia and compared other pharmacological treatments with ECT. The fourth article studied the effects of ECT in schizophrenia (catatonic and other types of schizophrenia). The side effect profiles were the same in all the articles. Conclusions: ECT alone or in combination with pharmacotherapy is recommended for the treatment of treatment resistant catatonia. It is implicated through this review that there is not much evidence based research done to support the efficacy of ECT in catatonia and this warrants for more RCTs and systematic reviews to facilitate ECT.

No. 111
Treatment of Psychosis and Agitation in Lewy Body Dementia With ECT
Poster Presenter: Shizhen Jia

SUMMARY:
Patient is 61 year old gentleman who presented with uncontrolled psychosis and agitation for 6 months.

No. 112
Treatment of Lewy Body Dementia Related Psychosis and Agitation With Electroconvulsive Treatment
Poster Presenter: Shizhen Jia, M.D.
Co-Author: Obiora Edward Onwuameze, M.D., Ph.D.

SUMMARY:
Lewy Body Dementia (LBD) is the second most common major neurocognitive disorder, after Alzheimer’s (Weintraud and Hurtig, 2007). It is neurodegenerative, progressive and debilitating with similar features as Parkinson’s disease (PD), diagnosed by cognitive decline prior or within 1-year onset of motor disturbances (Boot. et. al., 2013). Presence of visual, auditory hallucinations and early psychosis with fluctuating coursebis common (Burgut and Kellner, 2010). Gait instability; postural hypotension and depression are also prevalent. There is no effective treatment to slow progression. Anticholinesterase inhibitor, antipsychotics and antidepressants are some options to manage symptoms (Boot. et. al., 2013). Each pharmacological intervention comes with side effects and severe delusions with psychosis is often difficult to treat due to neuroleptic sensitivity in LBD patients (Burgut and Kellner, 2010). ECT has been shown to be effective in treatment resistant depression, psychosis and motor dysfunction in other psychiatric and neurological disorders (including PD) but usage in LBD has not been studied extensively (Burgut and Kellner, 2010). The improvement in motor and

psychiatric symptoms could significantly improve quality of life. This clinical case showcase the efficacy of ECT in patient with LBD that presents with psychosis, agitation and motor dysfunction. 61-year-old man presented with treatment resistant psychosis and agitation in association with Lewy Body Dementia. Patient has been experiencing years of neuro cognitive decline which preceded his motor disturbances, rapidly deteriorating in the last 4 years. Last 6 months before admission patient became aggressive, psychotic with hallucinations and physically threatening. Insomnia, aphasia, frequent falls and orthostatic disturbances also present. Patient has tried adequate dose and duration of Seroquel, Risperdal, Zyprexa, haloperidol, Ativan to manage psychosis and agitation without benefits. Clozapine discussed with POA as best option for LBD but was refused due to concern of side effect. Ativan was also titrated down due to falls. Patient responded to internal stimuli, experienced AH and VH, constantly agitated, restless and unable to be redirected. Patient also had frequent falls, poor oral intake due to agitation and inability to remember to swallow. ECT was started for treatment resistant psychosis and agitation. 6 acute series sessions done and weekly maintenance for 4 weeks, planned for once every 2 weeks twice and further treatment to be determined. He became compliant with medications, increased oral intake, better verbal communication. Patient continue to be pleasantly confused but is able to voice some needs with improved verbal communication, no longer aggressive or agitation and he has regained ability to respond appropriately to more social cues. Significant improvement of quality of life and able to be discharged to long term care facility.

No. 113

Treatment of Agitated Catatonia With Electroconulsive Treatment

Poster Presenter: Shizhen Jia, M.D.
Co-Authors: Rucha Haily Dalvi, M.B.B.S., Obiora Edward Onwuameze, M.D., Ph.D.

SUMMARY:

Joseph (1999) described agitated catatonia as "marked by excessive and purposeless motor activity and mimicry. Mutism, stuttering, and echolalia (repetition of what has just been said by another) represent speech and language problems associated with catatonia." (as cited by Marvel and Paradiso, 2004). Agitated catatonia is most often successfully treated with benzodiazepines such as Lorazepam (Cottencin et al., 2007). Patients below the age of 60 with pharmacological treatment resistant agitated catatonia have shown to improve with ECT (Haq and Ghaziuddin, 2014). Suzuki et. al. (2003) reported nine elderly schizophrenic patients with catatonia responded to to ECT, it was unclear if it was agitated catatonia. ECT has not been well documented in treatment resistance agitated catatonia of geriatric patients in previous literature. Therefore, this particular clinical case would assist in exploration of appropriate treatment for agitated catatonia in the elderly, in particular those with major neurocognitive disorder that does not respond to medications. 78 year old man presented with agitation, frequent falls, AMS and anxiety. He has hx of major neurocognitive disorder, probable Alzheimer type since 2008. He was perspiring profusely, repeated motor movement, echolalia and muscle rigidity that prevents him from resting. Significant confusion was also notable with uncontrolled agitation despite risperdal, prolixin and seroquel trial at adequate doses. Zoloft added for depression with minimal effect. Keppra discontinued due to relation to agitation and confusion side effect. Depakote was started for mood stabilization. Ibuprofen and Norco were placed for pain likely due inability to relax his muscles. There was significant bilateral edema of Lower extremities due to agitated catatonia induced immobility that was painful. Venous Doppler ruled out DVT. Antipsychotics were discontinued for a period of time due to concern with NMS with elevated CPK. Ativan started and changed to Klonopin and marinol was also tried to help with anxiety and inability to relax with minimal response. Patient was requiring complete care, minimal interaction and in constant distress. ECT was then proposed to family who agreed. With 6 acute sessions, the patient significantly improved, able to be conversational, responds to questions appropriately. He was calm and had decreased motor agitation. The patient regained his ability to ambulate with a walker. Thought process improved. His Klonopin and Norco usage also decreased as he improved. He was discharged to NH but decompensated and returned to hospital and

received maintenance ECT treatments for a few weeks where patient did well. However, towards the end of his second stay patient became restless and UTI was found. POA and family refused further intervention including ECT and requested full comfort care. With pain medications and comfort measures patient was not in distres

No. 114

Clinical and Biomarker Correlates of Dysnomia in Alzheimer's Dementia and Mild Cognitive Impairment: Validation of the Thai-Version Boston Naming Test

Poster Presenter: Daruj Aniwattanapong, M.D.

SUMMARY:

Background: Impairments in the Boston Naming Test (BNT), which measures confrontational word retrieval, frequently accompanies Alzheimer's dementia (AD) and may predict a more rapid progression of illness. This study aims to validate the Thai version of the BNT (T-BNT) and delineate the clinical and biomarker characteristics of dysnomia in patients with AD and mild cognitive impairment (MCI). Methods: This cross-sectional study recruited patients with AD, diagnosed according to NINCDS-ADRDA criteria (n=60), MCI, diagnosed using the Petersen criteria (n=60), and healthy controls (n=62). All participants were evaluated with the T-BNT, the Mini Mental State Examination (MMSE), the Verbal Fluency Test (VFT) and the Word List Memory (WLM) tests. Apolipoprotein E polymorphism and serum levels of folic acid, cholesterol and triglyceride were analyzed. Internal consistency, concurrent and discriminant reliability of the T-BNT were examined. Results: This study developed a T-BNT, which yielded good internal consistency (0.92), a one-factor unidimensional structure, and adequate concurrent and discriminant validity. Lower scores on the T-BNT highly significantly predict AD, but not MCI, and are positively associated with VFT and WLM test scores. The ApoE4 allele, lower folate levels and an increased triglyceride/HDL-cholesterol ratio were independently associated with significantly lower T-BNT scores. Conclusion: This study validated the T-BNT. Dysnomia as measured with the T-BNT is associated with impairments in semantic and episodic memory and with AD, and is influenced by biomarkers, which are known to modify memory via different mechanisms.

No. 115

Major Neurocognitive Disorder Presenting as Exacerbation of Mood Symptoms

Poster Presenter: Deepa Anand
Co-Author: Caesa Nagpal, M.D.

SUMMARY:

Major Neurocognitive disorder is an acquired decline in cognitive functioning which according to DSM-5 requires an evidence of significant cognitive decline from a previous levels of performance in one or more cognitive domains namely learning and memory, language, executive function, complex attention, perceptual-motor and social cognition. We report a case of a 58-year old female with a history of Bipolar disorder diagnosed 7 years ago, presenting with exacerbation of mood symptoms which was found to be a presentation of a major neurocognitive disorder. Method: (Case Report): Ms. H, a 58-year-old Caucasian female with a past history of Bipolar disorder was admitted to an acute psychiatric facility for depression and suicidal ideations. She also presents with auditory hallucinations and visual hallucinations of "people walking and talking around her." On exam, she was very labile with a disorganized thought process and also a poor historian. She had a past medical history of myocardial infarction. Clinical examination was unremarkable. Laboratory results and urine-analysis were within normal limits. She was started on Quetiapine 100 mg/ day for mood symptoms. She was noted to have memory problems and experiencing significant problems at home. MOCA score was 16 out of 30. She underwent clinical psychological assessment of neuropsychological status with evidence of moderate to severe cognitive impairment affecting all cognitive domains tested. Although patient had prior diagnosis of Bipolar disorder, patient's childlike behavior was better characterized by a neurocognitive dysfunction. For this reason, Seroquel was discontinued. Patient's mood and psychotic symptoms were well controlled and patient appeared to be at her baseline. She was referred for further psychological testing and MRI Brain. Discussion: Although neurocognitive disorders mostly present with significant cognitive decline

from a previous levels of performance in one or more cognitive domains namely learning and memory, language, executive function, complex attention, perceptual-motor and social cognition; one needs to be aware that these patients with neurocognitive dysfunction may present with prominent mood symptoms. A timely diagnosis can lead to opportunities for early intervention, better management of symptoms and patient safety. Conclusion: Physicians needs to be aware that patients with neurocognitive dysfunction may present with prominent mood symptoms.

No. 116

A Comparative Study of Photoplethysmography on Alzheimer's Dementia With Severe Depression and Without Depression

Poster Presenter: Dongwon Shin

SUMMARY:

Background: Heart rate variability (HRV) is fluctuation of the heart beat interval and is controlled by the autonomic nervous system (ANS). The frequency and time domain parameters of HRV are calculated and used to understand the autonomic condition. The severity of depressive symptoms has been correlated with a reduction in parasympathetic activity. Patients with Alzheimer's dementia (AD) and mild-to-severe cognitive dysfunction show subtle, absolute, and relative parasympathetic reduction and relative sympathetic exacerbation. However, no study has examined AD with comorbid severe depression using HRV. Therefore, we investigated ANS function and its abnormalities in severe depressive disorder in AD.Methods:The study enrolled 90 outpatients who met the International Statistical Classification of Diseases and Health-related Problems, 10th revision (ICD-10) criteria for AD. Of these, 40 patients had AD with severe depressive disorder (ADwD) and were matched for age and gender with 50 patients with AD without depressive disorder (ADwoD). Severe depressive disorder was diagnosed according to the ICD-10 criteria. Magnetic resonance imaging of the AD patients showed widening of the choroid fissure and temporal horn of the lateral ventricle. Early stage AD was assessed with the Clinical Dementia Rating Scale and Scale for Medial Temporal Lobe Atrophy. ANS was evaluated using HRV, measured with photoplethysmography. Frequency domain measures were obtained at low (LF) and high (HF) frequencies, and included the LF/HF ratio. Time domain measures were obtained from the standard deviation of normal to normal intervals (SDNN) and the root mean square of successive differences in the NN interval (RMSSD). Student's t-test was used to compare groups. Statistical significance was set at $p<0.05$. Results:In the frequency domain, LF and HF were significantly lower in ADwD ($p<0.001$) and the LF/HF ratio was significantly higher than in ADwoD ($p<0.001$). In the time domain, SDNN and RMSSD were significantly lower in ADwD than in ADwoD ($p<0.05$). The frequency and time domain parameters of HRV were significantly lower in ADwD than in ADwoD. Conclusions:HF and RMSSD indicate parasympathetic balance, the LF/HF ratio reflects sympathovagal balance, and SDNN reflects the complexity of heart rate fluctuations. In ADwD, HF, LF, and SDNN were reduced, while the LF/HF ratio was increased. Therefore, autonomic imbalance reflecting reduced parasympathetic activity relative to sympathetic activity was associated with ADwD. Compared with ADwoD, ADwD showed that the complexity of heart rate fluctuation is relatively impaired. The severity of depressive symptoms has been correlated with a reduction in parasympathetic activity. Therefore, severe depressive disorder may predispose patients with early AD to a heightened risk of cardiovascular disease. Physician should pay more attention for evaluation and treatment of ADwD.

No. 117

Korsakoff's Syndrome in a Patient With Schizophrenia: Illustrative Case and Literature Review

Poster Presenter: Ivonne Torriente Crespo, M.D.
Co-Authors: Yara Moustafa, M.D., Ph.D., Syed Aktar Naqvi, M.D.

SUMMARY:

Background: Substance use disorder is the most frequent and clinically significant comorbidity in patients with schizophrenia. About 33.7% of people with Schizophrenia or Schizophreniform disorder have met the criteria for alcohol use disorder at some time during their lifetimes. Biological and psychological factors are hypothesized to contribute

to this high co-occurrence. The Wernicke-Korsakoff Syndrome (WKS) is one of the gravest consequences of alcoholism, and post mortem studies suggest that it occurs in 12.5% of dependent drinkers, versus 2% of the general population. Korsakoff's syndrome is the chronic and amnestic part, which generally but not always, follows untreated Wernicke's encephalopathy. The disorder usually develops after years of chronic alcohol abuse and nutritional thiamine deficiency. It is characterized by memory impairment, cognitive dysfunction, confabulations, and is commonly a post mortem diagnosis. Case description: 45-year-old Caucasian female with 4 years of college education, and past psychiatric history of schizophrenia and alcohol use disorder. She was admitted to the hospital after being found wandering, disorganized, with illogical speech and partially unclothed. She provided limited history at admission, but review of records revealed significant cognitive and functional deterioration over the past 5-8 years. On examination, she was confused, with poor insight into her condition and showed serious memory deficits, especially anterograde amnesia with inability to form and consolidate new memories, variable retrograde amnesia, and many fantastic confabulations. Neurological examination revealed: poor physical coordination, wide-based gait and abnormal sensations. Neuropsychological testing showed an above average level of premorbid functioning, with a significant decline (-25 points) in the Full scale IQ (FSIQ), a difference greater than expected or attributable to schizophrenia alone. Discussion: We reviewed the literature related with comorbid alcoholism, self-neglect and thiamine deficiencies in patients with schizophrenia and other psychiatric disorders. Our case and others reported in the literature highlight the importance of an opportune diagnosis of alcohol-related pathology in patients with psychiatric illness. The presentation emphasizes the possible effects of long-term alcohol use, specific risk factors for the development of WKS in patients suffering from a major psychiatric disease and the possible elements involved in its frequent under recognition and under diagnosis. Conclusions: Early diagnosis and treatment of WKS have the potential to significantly reduce the memory loss and associated symptoms and to prevent further neurological deterioration that impact the level of global functioning and autonomy. It is crucial to increase the awareness of the problem, to improve the screening methods, to enhance the assessments protocols and instruments and to develop clear treatment recommendations.

No. 118

Frontotemporal Dementia: Latest Evidence and Clinical Implications

Poster Presenter: Juan Joseph Young, M.D.
Co-Authors: Silpa Balachandran, M.D., Krupa Pathak, M.D., Fnu Syeda Arshiya Farheen, M.B.B.S., Jason Patel, Rajesh R. Tampi, M.D., M.S.

SUMMARY:
Introduction: Frontotemporal dementia (FTD) describes a cluster of neurocognitive syndromes that present with impairment of executive functioning, changes in behavior, and a decrease in language proficiency. FTD is the second most common form of dementia in those younger than 65 years old and is expected to increase in prevalence as the population ages. Methods: Pubmed was searched to obtain reviews and studies that pertain to advancements in genetics, neurobiology, neuroimaging, classification, and treatment of FTD syndromes. Articles were chosen with a predilection to more recent preclinical/clinical trials and systematic reviews. Results: Recent reviews and trials indicate a significant advancement in the understanding of molecular and neurobiological clinical correlates to variants of FTD. Genetic and histopathologic markers have only recently been discovered in the past decade. Current therapeutic modalities are limited, with most studies reporting improvement in symptoms with non-pharmacological interventions. However, a small number of studies have reported improvement of behavioral symptoms with SSRI treatment. Stimulants may help with disinhibition, apathy, and risk-taking behavior. Memantine and cholinesterase inhibitors have not demonstrated efficacy in ameliorating FTD symptoms. Antipsychotics have been used to treat agitation and psychosis, but safety concerns and side effect profiles limit utilization in the general FTD population. Nevertheless, recent breakthroughs in the understanding of FTD pathology have led to developments in pharmacological interventions that focus on producing treatments with autoimmune, genetic, and molecular targets. Conclusion: FTD is an

under-diagnosed group of neurological syndromes comprising of multiple variants with distinct neurobiological profiles and presentations. Recent advances suggest there is an array of potential novel therapeutic targets, although data concerning their effectiveness is still preliminary or preclinical. Further studies are required to develop pharmacological interventions, as there are currently no FDA-approved treatments to manage FTD syndromes.

No. 119

Persistent Delirium Can Disguise as Dementia After a Mild Traumatic Brain Injury: A Case Report and Literature Review

Poster Presenter: Ahmed Eid Elaghoury, M.D.
Co-Author: Amany Ragab, M.D.

SUMMARY:

Background: For decades, delirium was considered as a short-term medical event, and it was rarely deemed to exceed one month according to the DSM-III. Recently, this tradition has repeatedly been examined and currently "persistent delirium" that lasts for weeks or months is described in the *DSM-5*. In that case, the distinction between persistent delirium and dementia is a difficult clinical situation. **Methods:** Current report describes a seventy-one years old senior man presented with rapidly impaired activities of daily living (ADL) along the previous four months after a mild traumatic brain injury (TBI). A literature review is done for "persistent delirium" or after a TBI using "Clinicalkey" and "PubMed" databases. **Results:** The impaired ADL described were regained three days after receiving haloperidol 0.75mg once daily prescribed for worsened agitated behaviors and increased level of arousal at night, "sundowning." Only advanced age was identified as a risk factor for persistent delirium in the current patient, without recognized previous TBI or chronic medical conditions. A recent systematic review (age ≥ 50 years, N=1,322 patients with delirium) estimated persistent delirium at discharge to be 21% after six months. Posttraumatic delirium is described in the literature since the 1930s, along with other descriptive terms, persisting for a duration not corresponding to the initial severity of TBI. **Conclusion:** Mild TBI can induce persistent delirium. In that case, diurnal variation of the level of arousal along the day (sundowning) may be utilized to clinically distinguish between persistent delirium and dementia, especially in patients presented with rapid impairment of ADL.

No. 120

Partial Fetal Alcohol Syndrome in an Adult: A Diagnostic Challenge in a Soldier With Severe Impulsivity and Hallucinations

Poster Presenter: Courtney E. Kandler, M.D.
Co-Author: Rohul Amin, M.D.

SUMMARY:

Background: Fetal Alcohol Spectrum Disorder is a term used to describe a group of specific conditions that can occur in an individual with prenatal alcohol exposure. Comorbid psychiatric disorders are common and can include conduct disorder, oppositional defiant disorder, anxiety, adjustment disorder, depression, sleep disorder, substance use disorder, and psychosis. Case: We present the case of an 18 year-old US Army Soldier whose clinical picture over the course of seven months in the military behavioral health system proved a diagnostic challenge. His initial contact with behavioral health was following a suicide attempt. He overdosed on acetaminophen and ondansetron requiring intensive level care. He also presented with depressed mood and reported command auditory hallucinations daily since he was nine years old. He was eventually discharged with a DSM-5 diagnosis of Psychosis, Unspecified and Mood Disorder, Unspecified. Over the course of his care, his clinical picture became striking for persistent reported command auditory hallucinations though he acknowledged those were not real and reality testing was intact. He was also very impulsive, reported difficulty with concentration and attention, and physically demonstrated dysmorphic facial features. He was referred to a Geneticist and diagnosed with partial Fetal Alcohol Syndrome (pFAS). In the context of persistent behavioral issues stemming from co-morbid diagnoses of disruptive, impulse control and conduct disorder, as well as an extensive history of substance abuse, he was medically discharged from the Army. Conclusion: The diagnosis of pFAS requires high clinical suspicion and diagnosis is often delayed. Psychiatrists need to

consider a broader differential, including pFAS when wide-ranging symptoms are seen without clear DSM-5 conditions as a unifying diagnosis. Early diagnosis informs expectations of response to treatment given patients with neurodevelopmental conditions can have varying (minimal) response to psychotropics. Using this case as a clinical vignette, we aim to provide an overview of pFAS in adults to educate our peers.

No. 121

Development of an Instrument for the Assessment of Perceptions, Attitudes, and Behaviors That Favor Reconciliation in the Colombian Population

Poster Presenter: Lina Maria Gonzalez, M.D.
Co-Author: Juan Cotte

SUMMARY:
Background: The effects of the Colombian armed conflict on the general population need to be assessed, and interventions that favor reconciliation must be designed and evaluated. Considering this, in association with USAID and ACDIVOCA, as part of the Program of Alliances for Reconciliation, our organization developed an instrument that aims to assess changes in perceptions, attitudes and behaviors toward reconciliation, to be applied in adults, of any educational level, and a variety of social contexts. Methods: Search terms were determined using the MeSH and APA dictionaries, to obtain appropriate definitions for the categories of perceptions, attitudes and behaviors, and 18 subcategories, relating to the categories were defined. Using these terms, a systematic review of psychometric tests was performed using APA-PsycTests. The search results were reviewed by two independent evaluators, and selection discrepancies were revised by an expert. Inclusion criteria for the tests were defined as follows: (i) availability of the scale in English or Spanish; (ii) the construct or the purpose of the scale relates to the categories or subcategories of the search; (iii) the scale is applicable in an adult population with a low educational level; (iv) the scale can be self-completed. Exclusion criteria were (i) the scale uses audiovisual aids, (ii) no report of validation or psychometric properties, and (iii) the instrument is use to validate a construct. The final selection of scales was presented to a panel of eight experts in topics of reconciliation with a multidisciplinary background. This panel reviewed each individual item from the scales, to judge if they considered the item was appropriate to evaluate a perception, attitude or behavior toward reconciliation, and to assess the language of the item and propose an adjusted version. Results: The search yielded 234 results, and another 8 tests were added by experts' suggestion, for a total of 242 scales. The review by the independent evaluators and the revision by the expert, left a selection of 11 tests. These were presented to the expert panel, which selected items from 6 scales. Only items that were considered appropriate by 5 or more experts were considered for selection, and using feedback from the experts, the language of each individual item was adjusted. This process ended with a 20-item instrument. Following recommendations from psychometry experts a 5-point scale was defined to grade each item, and for a preliminary grading system 12 subjects were asked to rank the items in order of importance. The results of an ongoing pilot study will be used to validate the instrument, and test its accuracy. Conclusions: Multiple interventions have been proposed to promote reconciliation, but there are no instruments available to measure their efficacy. Here we propose a novel instrument design approach that can be used before and after the interventions to assess their effect on the target populations.

No. 122

Assessment of the Efficacy of Writing and Memory Workshops Improving Cognition and Life Satisfaction

Poster Presenter: Juan Cotte

SUMMARY:
Background: During the 21st century, for the first time in history there is going to be more people over 60 years than people under 15 years of age, and this will not happen without consequences. Cognitive impairment is more common as people age, and in association with neurologic diseases, it has been identified as major cause of disability worldwide. This highlights the importance of cognitive interventions that positively impact cognitive, physical, and social functioning and quality of life, of the old adults. Methods: A quasi-experimental

design was performed to assess the effect of writing and memory workshops on life satisfaction and cognitive function in subjects over 60 years of age from three Colombian municipalities. Quantitative and qualitative methods were employed. Cognitive function was measured using the Montreal Cognitive Assessment (MoCA). Then the narrative formation strategy for the elderly, Historias en Yo Mayor (Stories in I Major) was applied to all of the study subjects. The strategy consisted of 26 weeks of 2 hour workshops divided in: (i) theoretical component in which participants were given tools to improve their story-telling ability, (ii) practical component in which the participants told their stories using oral and written narrative to their peers in the workshop, and (iii) sustainability component, focused on developing mechanisms to establish the workshops as a long-term activity in the community. Cognitive function was reassessed halfway through, and at the end of the workshops. The qualitative component consisted of focus groups to assess the satisfaction of the participants with the workshops. Results: The study population consisted of 40 subjects, residents from the departments Antioquia and Quindio in Colombia. 62.5% of the subjects were residents from urban areas. The mean age of the population was 70 years (SD 8.3 years). Also, 7.5% of the study participants did not have any academic studies, and 30% had college or superior studies. As for changes in cognitive function, there was a tendency to improve language, assessed by saying words starting with the same letter in a one minute span. At baseline 60% of the subjects were able to say more than 11 words, halfway 67% and at the end 70%. No clear tendencies were evidenced for the other components of cognitive function. Regarding the qualitative component most of the subjects reported being satisfied with the workshops and highlighted that this kind of activities helped them establish relations with other members of their community. Conclusions: There is a need for intervention that help the elderly members of society preserve their cognitive function. Writing and memory workshops, may slow the decline of cognitive function, particularly the language component, and generate networks for the people inside their communities. Further, controlled research, with longer follow-up should be performed to assess the long-term benefits of this interventions.

No. 123

The Debbie Project: A Service-Based Learning Program Aimed at Reducing Biases Among Medical Students Toward Individuals With Disabilities

Poster Presenter: Eric Gibbs
Co-Author: Gabrielle Hodgins

SUMMARY:
Background: The Debbie Project (DP) was established largely to address a lack of training with persons with intellectual and developmental disabilities (IDD). The purpose of the study was to assess perceptions in medical students before and after their participation in a volunteer program. Methods: Each medical student was assigned to a preschool classroom of children with IDD that they attended weekly during the 2016-17 school year. Perceptions of medical student volunteers were measured by administering the Multidimensional Attitude Scale Toward Persons with Disabilities (MAS). The MAS is a 34-item self-report questionnaire. Each item on the MAS is based on a 5-point scale, ranging from 1 to 5. The survey was done in an anonymous online format. Results: There were baseline sex differences in the data. On feeling helpless, females reported higher baseline scores. On fear, males reported higher baseline scores. On guilt, females reported higher baseline scores. Having a family member with disabilities resulted in significant differences on the pre-volunteering survey on stress and depression. Six questions showed a statistically significant improvement in score after volunteering. These were relaxation, serenity, calmness, pity, alertness, and finding an excuse to leave. Notably, there were no statistically significant changes that represented a worsened attitude towards persons with disabilities after volunteering. The total score improvement was also significant. Conclusion: Many studies endorse the idea that exposure to developmentally different patients helps to eliminate bias and discomfort of physicians. Further research is warranted to assess how medical education can best train future doctors to work with this special patient population. Significance: Upon analyzing the data it is clear that volunteering with developmentally different

preschoolers has numerous positive effects on the attitudes of medical students towards persons with disabilities.

No. 124

The Development of Protocol for Disaster Assistance Center of Korea Through a Delphi Method

Poster Presenter: Ho-Kyoung Yoon
Co-Authors: Young-Hoon Ko, Jae-Hon Lee, M.D., Ph.D.

SUMMARY:

Background: Disasters are often overwhelming and sudden in the form of natural disaster, terrorism, and large-scale accident, and experienced by a mass of people. The nature of disasters can disrupt individuals and families as well as the community at the global level. In the Sewol ferry disaster with 304 victims, there was no protocol to prepare adequate psychosocial supports to the individuals who experienced the disaster directly or indirectly. As a result, psychological difficulties have been experienced not only by the person directly involved in the accident but also by the community members (1). The reason for this is that existing resources such as medical institutions, social welfare facilities, and public institutions are not properly integrated. To organize the resource management and reorganization plan of community resource, we presented detailed plans and models to be implemented in each community in each phase including prevention, preparation, response and recovery. Methods: The process of developing the protocol was conducted using the Delphi method. A surveys was conducted for experts consisting of psychiatrists, psychologists, social workers, and administrators. A questionnaire consisting of 10 different domains with blank space for free statement was circulated. The comments and answers were summarized and discussed at a meeting of the related members to agree the final contents of the protocol. Results: A total of 30 statements achieved consensus for inclusion. It was suggested that the role of the community in response to the disaster should be divided into four phases according to the characteristics of each stage. The agreed four phases are as follows. Phase 0 is the step to prepare for the usual situation before a disaster occurs. At this phase, each institution in the community prepare the disasters. Phase 1 includes psychological first aid performed in relief activities and health services activities immediately after the disaster. At this phase, information on psychosocial support is provided at each disaster site and stabilizing intervention is provided. And the organization that will direct the resource allocation is specified. Phase 2 refers to the initial mental health support service that is provided within 1 month and up to 3 months from the disaster. It supports the stabilization program, psychological evaluation, acute stress counseling and acute phase medical treatment in disaster scene, victim's home, and each institution. Phase 3 is to support mental health assistance services after three months of the disaster. The goal of this phase is to return the victims and related individuals to a community successfully. Conclusion: The Delphi expert consensus method allowed to build a new protocol in an area where there are incomplete evidence. This protocol is expected to be a model that will help the efficient allocation of resources in disaster in Korea.

No. 125

Impact of Trauma and Post-Migration Stressors on African Immigrants and Refugees in Sweden

Poster Presenter: Simon Yohannes

SUMMARY:

Background: 1 in 10 refugees have PTSD, and 1 in 20 have depression, but there is little understanding about the predictors of PTSD and depression in refugees and immigrants, and its association with sexually risky behavior. Methods: The study include semi-structured interviews using validated and reliable questionnaires with 420 African immigrants and refugees who were living in Sweden. The questionnaires included the Harvard Trauma Questionnaire, the Hopkins Checklist, and a modified version of the WHO sexual risk behavior questionnaire. Data analyses included chi squared analysis and Mann-Whitney U test. Results: Prevalence data showed condom use was low, but there was no relationship between PTSD and condom use [$X2 = 4.39$, $p = 0.11$]. There was no significant association between traumatic events and the number of regular [$t = 1.764$, $p = 0.08$] or casual

sexual partners [t = 0.904, p = 0.37], but there was a significant positive association between use of commercial sex workers and the number of traumatic events experienced [t = 2.39, p = 0.017]. Females who reported higher levels of depression also had a greater number of lifetime sexual partners [U=3844, p= 0.001], regular sexual partners [U=3771, p=0.002] and concurrent partners [X2 = 4.39, p = 0.027]. PTSD and depression were not significant predictors of sexual risk behavior for men. Conclusions: The development of interventions to improve adjustment after migration should include treatment of PTSD and depression due to the significant association with sexual risk behavior.

No. 126

Cultural Differences in the Expression of Depression and Suicidality: A Case Report

Poster Presenter: Zev J. Zingher, M.D.

SUMMARY:

The patient is a 36-year-old female from the country of Manyamar who was initially admitted to the emergency room following a suicide attempt via carbon monoxide poisoning and subsequent lactic acidosis. In the ER the patient was diagnosed with a NSTEMI and elevated Troponins due to Takotsubo cardiomyopathy, commonly known as "Broken Heart Syndrome." Following medical stabilization in the ER, the patient was transferred to the inpatient psychiatric unit. The patient was an architect in her home country and came to the United States 2 years prior to complete a masters degree in urban design. She successfully completed her masters degree at which point she began to seek employment. To her tremendous dismay, she was unable to get hired for any job following graduation from her master's program and was informed by U.S. immigration she would have to return to her home country of Manyamar. As result of this perceived "failure" to succeed finding work in America, the patient felt tremendous shame, that she had "lived long enough" and would commit suicide via carbon monoxide poisoning in her apartment which she implemented and was found unconscious by her roommate prior to admission. While working with the patient, it became clear that the patient's sense of shame and embarrassment drove her to attempt suicide. She did not present with the classic features of depression with anhedonia, difficulty sleeping, weight loss, etc., but rather felt that her cultural and familial identity in Manyamar was such that she could keep living as such a source of embarrassment. The patient would spend approximately 7 hours a day sitting on her bed meditating as she was Buddhist. She was started on a very low dose of an SSRI antidepressant, though she was hyper responsive to it and would not take the medicine following discharge. Of note, the patient consistently avoided speaking about any psychologically oriented topics and mental illness were "not discussed" in her country nor within and family. When asked if any family members suffered with mental illness, the patient said no, that such issues are not spoken about in her culture. From a psychological/biological perspective, it is interesting to reflect on how the patient's refusal to express her emotional life directly was instead expressed somatically, in part, through her development of Takotsubo cardiomyopathy and its connection to cardiac dilation following severely stressful and traumatic experiences leading to noradrenaline release and cardiac tissue damage. Importantly, this case report also illustrates the importance of American psychiatrists to remain cognizant of the way cultural differences often motivate immigrant patients to depression and potentially even to suicide.

No. 127

First-Episode Auditory Hallucinosis in a 66-Year-Old Patient as an Initial Symptom of Brain Change

Poster Presenter: Zev J. Zingher, M.D.

SUMMARY:

The patient is a 66 year old African American female with no past psychiatric history who was brought to the ED by her son due to auditory hallucinations for the last one year telling the patient to pack up and leave the house she has inhabited for the last 30 years. The patient is psychiatrically notable for her positive affect, articulate speech, goal-directed, logical thought process and sense of humor in juxtaposition to her conviction that the male and female voices of, as she says, "real people I cannot see" have been telling her to leave her house. Medically, the patient reports that she went on a diet about 1 year ago in which she ate only 1 meal per day and subsequently lost fifty pounds. She

denied the use of any diet or herbal supplements. She has no medical problems besides childhood asthma. The patient reports that the voices go away when she listens to music and for the most part, these voices do not interfere with her life (i.e. she continues to garden, visit her 86 year-old mother, read voraciously, exercise, etc.). She admits to bilateral tinnitus and intermittent palpitations when feeling anxious. Patient denied depression, panic attacks, SI/HI, VH, tactile hallucinations, difficulty sleeping, racing thoughts, hyperactivity, crying, headaches, vision changes, nausea, vomiting, numbness, or paresthesias. Her CBC was WNL, UDS was negative, UA was negative for acute infection. CT scan of the head was performed and showed no acute intracranial abnormalities. Additionally, she was examined by the neurology consult team for an organic explanation of her symptoms. They reported that she was neurologically clear. The patient is particularly interesting from a psychiatric and neurological perspective since she presents with command auditory hallucinations at a later age, and as she joked, "The neurology team didn't find a baseball sized tumor in my brain to explain my voices." She presents later in life with psychosis even in the context of the bimodal age distribution seen in schizophrenia. Prior to initiating psychopharmacologic treatment, the patient was administered a MOCA cognitive assessment, scoring a 26 out of 30 with construction deficits and mild short-term memory loss with a confabulated recall that possibly suggest early brain change. The patient was started on Abilify 5mg and released from acute inpatient care. While this was a very brief inpatient stay, this patient's presentation brings up interesting questions regarding auditory hallucinations without an apparent organic cause, though a MRI, if cost permitted, would have be helpful. Additionally, this case presents auditory hallucinosis in a moderately elderly patient as a potential early warning sign of brain change presenting as a psychiatric malady.

No. 128

Modern Slavery: Human Trafficking, the Mental Health Consequences, and Louisiana's Response

Poster Presenter: Shawn E. McNeil, M.D.
Co-Authors: Astik Joshi, M.D., Mark Cogburn, D.N.P., Ph.D.

SUMMARY:
Human Trafficking Is the second most profitable transnational crime and it generates $150 billion annually. This activity can include trafficking for sex, labor, or even organs. This is a crime that affects young people disproportionately. Youth are at a greater risk if they have, faced prior abuse, escaped civil conflict, lost their homes, fled broken child protection systems, or lack strong social support systems. Aside from the 13th amendment which protects against involuntary servitude (except as punishment for a crime), there are several laws and statutes that address human trafficking on a state-to-state basis. In Louisiana, LA Revised Statue 14:46.2 both defines the activity and prescribes punishment for those involved in committing this crime. 88% of trafficked young people saw a medical provider during their time being trafficked. So, it is important to know the signs. Additionally, these patients often present in the mental health setting with specific disorders including depression, anxiety, nightmares, substance abuse, overdoses, and suicide attempts. In treating these patients, it is important to use a trauma-informed approach which involves assessing for signs of stress while interacting with the patient to avoid retraumatization. Finally, the scope of the human trafficking problem in Louisiana is detailed. Additionally, resources available in the state are outlined to illustrate the approach this state has taken to address this problem.

No. 129

The Role of Vitamin B6 Deficiency in Neuropsychiatry

Poster Presenter: Shawn E. McNeil, M.D.
Co-Authors: Astik Joshi, M.D., Anuj Shukla, M.D., Miky Kaushal, M.D., Lee Stevens, M.D., Sarfraz A. Mohamed

SUMMARY:
Vitamin B6 (including pyridoxine, pyridoxamine and pyridoxal) is a water-soluble vitamin which is essential for metabolism in humans. Although deficiency of this vitamin is rare, clinicians should recognize its symptoms which may be severe. Vitamin B6 is a cofactor in several metabolic pathways including the tryptophan-serotonin pathway. There are several proposed neuropsychiatric manifestations of vitamin B6

deficiency. Vitamin B6 has been associated with serotonin or catecholamine deficiency. A previous study has established the link between low B6 levels and depression in outpatients. A "significant association" was found between PLP (pyridoxal 5'-phosphate, a B6 derivative) and depressive symptoms. Research on the role of vitamin B6 on cognition is limited. Overall, longitudinal analyses have found that insufficient vitamin B6 correlated with cognitive decline and Alzheimer's disease in older adults, while other B vitamins have not shown the same effect. Further investigation has revealed the role of vitamin B6 on homocysteine levels. High blood levels of the amino acid homocysteine have been shown to correlate with increased risk of Alzheimer's disease. The presence of pyridoxal-5-phosphate, is noted as a marker for cognitive decline. B vitamins have been advanced as a preventive for insomnia based on research that suggests deficiencies in vitamin B6 promote psychological distress and ensuing sleep disturbance. However, doses of B6 over 100 mg have been known to be toxic and cause night restlessness, vivid/lucid dreams over a prolonged use period. There was a tendency for vitamin users to have a greater number of awakenings during the night, a greater total wake time during the night, greater use of sleep medications, and a higher rate of insomnia than non-users. Vitamin B6 is important in the development and functioning of the human brain. B vitamin levels can be affected by a variety of factors including age and genetics. In fact, genetic polymorphisms may complicate the direct relationship between B vitamin deficiency and potential symptoms. Genetic factors regulate biochemical pathways that use B vitamins as cofactors (for example, homocysteine is broken down to the antioxidant glutathione with B6 as a cofactor). Vitamin B6 is involved in the synthesis of several neurotransmitters including serotonin, dopamine, norepinephrine, epinephrine, and GABA. Because it raises the concentrations of serotonin and dopamine, it can improve symptoms of depression which in turn also improves sleep. B6 is also involved in the synthesis of melatonin via serotonin. Thus, it can improve the quality of sleep and preserve the circadian rhythm. B6 may lower the risk for Alzheimer's disease by lowering serum homocysteine levels.

No. 130

Cognitive Deficits and Metabolic Parameters in Veterans

Poster Presenter: Ali Najafian Jazi, M.D., M.S.
Co-Author: Mamta Sapra, M.D.

SUMMARY:

Background: Cognitive disorders in men may precipitate weight loss, with eventual propensity to malnutrition(1). Such metabolic changes are expected to stem from the patient functional dependence, and therefore influenced by the level of caregiver commitment. The objective of our study is to assess the relationship between severity of cognitive dysfunction and body weight, body composition, general markers of circulation and nutrition in a Veterans population at the Salem V. A. Medical Center. Methods: 53 patients participated in an ongoing cross-sectional study in Memory Disorder Clinic at Salem VA Medical Center. We obtained demographic data, Montreal Cognitive Assessment score(MOCAs), systolic blood pressure (SBP), diastolic blood pressure (DBP), mean arterial blood pressure (MAB), body mass index (BMI), waist circumference (WC), waist-hip-ratio (WHR), and waist-height-ratio (WH). Additionally, in order to assess possible effect from metabolic and nutritional status we collected available data for lipid profile (total cholesterol, high density lipoproteins (HDL), and triglycerides (TG)), thyroid stimulating hormone (TSH), and albumin level. Results: Using regression analysis we studied the correlation between MOCAs vs. age, SBP, DBP, MAB, BMI, WC, WHR, WH, albumin, total cholesterol, HDL, TG, and TSH. The study found significant correlation between BMI and MOCAs ($r=0.32$, $p=0.023$). Additionally, we analyzed the relationship between BMI and all variables except MOCAs. Results showed significant relationship between BMI vs. WC ($r=0.9$, $p<0.00005$), WHR ($r=0.62$, $p<0.00005$), WH ($r=0.89$, $p<0.00001$), TG ($r=0.296$, $p=0.03$), HDL ($r=0.33$, $p=0.015$), and age ($r=-0.45$,$p=0.0007$).There was also a positive but insignificant correlation between DBP and BMI ($r=0.27$, $p=0.051$). Conclusion: Decreased body weight as a correlate of cognitive impairment in the Veterans at Salem VAMC is not found to be associated with malnutrition and circulatory compromise. The latter is possibly attributed to the

level of care offered to this patient population. Strong correlation of BMI, but not cognitive scores with markers of abdominal fat redistribution indicate cognitive-independent role of total body fat as the underlying mechanism for abdominal obesity and its metabolic adversities. The results in this study warrant more elaborate prospective trials in the future.

No. 131

Amyotrophic Lateral Sclerosis and Late Life Depression: A Case Report

Poster Presenter: Arushi Kapoor, M.D., M.Sc.
Co-Author: Sarah Anne Kleinfeld, M.D.

SUMMARY:

Amyotrophic lateral sclerosis (ALS), commonly known as Lou Gehrig's disease, is a progressive, idiopathic, and chronic neurodegenerative disease. Upper and lower motor neurons responsible for voluntary muscle control are typically affecfted. This neural degeneration causes spastic paralysis and muscle dystrophy which results in disability and ultimately death, typically within 2-5 years after diagnosis. The national prevalence of ALS in 2011 was 3.9 per 100,000. White males, non-Hispanics and those between the ages of 60-69 years are the most frequently affected populations. ALS is a progressive disease associated with multiple complications including respiratory insufficiency, sialorrhea, pseudobulbar affect, sleep disruption, spasticity, fatigue, laryngospasm, autonomic symptoms, pain, and depression. Depression is a common neuropsychiatric complication of ALS. Estimated prevalences range from 6% for severe depression and 16.2-29% for mild depression. Depression may be difficult to diagnose and treat given confounding factors related to the progressive nature of the primary disease. For example, mood symptoms may be difficult to separate from disease specific physical symptoms such as fatigue and weakness. Additionally, given the progressive nature of ALS, ongoing decline in physical functioning may make mood symptoms refractory to treatment. Several new disease specific rating scales, including the ALS Depression-Inventory, exist to aid clinicians with appropriate diagnosis and help guide treatment. We present a case of an elderly man diagnosed with ALS who subsequently developed depressive symptoms in the context of his neurodegenerative disease and transition to a nursing home after experiencing a fall at home rendering him unable to independently care for himself. As with many ALS patients, his physical decline and debilitation contributed significantly to the development of depressive symptoms. He also had difficulty accepting his need for a higher level of care. Our patient ultimately experienced remittance of his depressive symptoms after treatment with an SSRI. In addition to highlighting pertinent aspects of this case, our poster will present a literature review discussing the evaluation, diagnosis, and treatment of patients with ALS and co-morbid major depressive disorder.

No. 132

New-Onset Psychosis in a Patient With Parkinson's Disease and Major Depressive Disorder

Poster Presenter: Brittany Mott, M.D.

SUMMARY:

Patient is 63-year-old Caucasian man with history of Parkinson's Disease and Major Depressive Disorder, who presented to the inpatient geriatric psychiatry unit for the treatment of worsening depression and presumed catatonia. He was transferred from a medical unit after he was treated and stabilized for failure to thrive. He has a history of multiple depressive episodes, however, no previous psychiatric inpatient admissions, no significant substance abuse history, and no history of psychosis or mania. Upon initial assessment, he endorsed three months of: amotivation, anhedonia, and apathy following the death of his father, which resulted in inadequate self-care, >40 pound weight loss, decubitus ulcerations, and non-adherence to medications (including Carbidopa-Levadopa). Physical exam revealed rigidity, with no evidence of other catatonic symptoms. His mental status examination was significant for a dysphoric affect with poor insight into the severity of his symptoms. His Carbidopa-Levadopa was restarted, and bupropion and quetiapine were initiated for mood stabilization. Within a few days, he became increasingly: guarded, suspicious, and paranoid, with no identifiable acute medical processes to explain the behaviors. Quetiapine was not effective in alleviating the psychotic symptoms and higher doses

resulted in over sedation, so it was discontinued and risperidone was started which further worsened his psychosis. Neurology was consulted to assist in the management of Carbidopa-Levadopa dosing, and observed that the patient experienced marked worsening of hallucinations and delusions at higher doses. Their assessment stated that the onset of this degree of drug induced psychosis within 3-4 years of motor symptom onset suggested a strong possibility of Diffuse Lewy Body Disease. Through collaborative care discussions, the patient was started on clozapine in order to minimize extrapyramidal symptoms while ensuring adequate treatment of psychosis while he resumed Carbidopa-Levadopa. In this poster, we discuss the challenges of mood stabilization and finding the dopaminergic balance with antipsychotic and Carbidopa-Levadopa treatments in a patient who suffers from a neurodegenerative disease, in addition to the importance of a collaborative care approach with thorough discharge planning in this multifactorial case.

No. 133

The Effect of Depression on Serum Amyloid-Beta Protein in Alzheimer's Disease and the Elderly Without Dementia

Poster Presenter: Dohoon Kim

SUMMARY:

Background: This study first explored whether serum amyloid-beta peptides (amyloid-beta 40, amyloid-beta 42 levels, and amyloid-beta 40/42 ratio) are different by the presence or absence of depression in Alzheimer's disease group and in the elderly without dementia group through collinear observations. The study also examined alteration of serum levels after depression treatment in AD patients with depression and the elderly with late-life depression. Methods: Serum peptides amyloid-beta levels were measured in 24 AD patients with depression (AD + D), 27 AD patients without depression (AD – D), 16 late-life depression (LLD), and 13 healthy controls using solid phase sandwich ELISA assay kit. The patients were treated according to their diagnosis for 16 weeks. All outcomes were assessed at baseline and at endpoint. Comparisons of differences in amyloid-beta 40, amyloid-beta 42 levels and amyloid-beta 42/40 ratio between groups were done using the independent sample t-tests, and Mann-Whitney U-test when the data were not normally distributed. Paired t-tests were used for comparisons of before and after treatment. Results: There were no differences in serum amyloid-beta 40, amyloid-beta 42 levels, and amyloid-beta 40/42 ratio between AD + D and AD - D, and serum amyloid-beta levels were unchanged after depression treatment in AD + D. In contrast, LLD had lower serum amyloid-beta 42 levels than HC. After depression treatment, LLD showed a significant rise in serum amyloid-beta 42 levels and a decrease in amyloid-beta 40/42 ratio between pre- and post-treatment. Improvement in executive function in LLD was associated with enhanced serum amyloid-beta 42 levels. At 16 weeks, AD – D showed increased serum amyloid-beta 42 levels and decreased amyloid-beta 40/42 ratio. Conclusion: From results of this current study, it could be speculated that serum amyloid-beta levels might not be affected by depression even though depression is superimposed to AD. In LLD, however, depression might play a role in reducing serum amyloid-beta 42 level. Accordingly, this study suggests that pathophysiology of depression in AD may differ from LLD.

No. 134

Effective Use of the Interstate Compact: A Case of a 69-Year-Old Male With Mental Illness Who Wandered Off

Poster Presenter: Lionel E. Znaty, M.D.
Co-Author: Raj V. Addepalli, M.D.

SUMMARY:

Mr. W is a 69 year old Caucasian male with a past psychiatric history of schizophrenia arrived to the psychiatric emergency services in handcuffs, hurling racial slurs to everyone, threatening and menacing. Upon first evaluation in the inpatient unit, patient endorsed several delusional thoughts including "having the cure for herpes, AIDS, malaria and sleeping sickness". He was evaluated and started on risperdone, which was titrated to 2 milligrams twice daily and sodium valproate 250 milligrams twice daily, which was titrated to 500 milligrams twice daily. Sodium valproate was subsequently discontinued as patient complaining of severe sedation and his ammonia levels were found to be increased to 65mg/dL. Patient was found to have a

high TSH and history of untreated hypothyroidism for years. Patient constantly refused Levothyroxine during the admission. Patient's case manager was eventually located and corroborated with history obtained. As per case manager patient is a Vietnam War veteran who was diagnosed with schizophrenia for more than thirty years and was on Haloperidol decanoate for years. Patient reportedly had an IQ of 130 and has a diagnosis of PTSD after a male soldier opened fire inside the patient's tent, killing his comrades but sparing his life. In addition, after the patient was discharged, he was physically assaulted by a group of males, and "retaliated with flashbangs and opened fire." Patient continued to be delusional and not agreeing to switch in antipsychotics and refused a trial of clozapine. Patient refused a CT scan and serum risperidone levels. This article reflects on the difficulties in medication compliance and success of treatment in the geriatric psychiatry population. The local VA hospital was contacted and did not agree for an inter-hospital transfer, as patient has not been connected to the VA for 24 months. Previous treatment providers in Pennsylvania were contacted and the local state hospital in Pennsylvania agreed to the interstate transfer. This case highlights the importance of the interstate compact on mental health, which was initiated in 1956 which ensure that the proper treatment of persons with mental conditions and mental disabilities can be facilitated by cooperative action to the benefit of the patients between state hospitals and the long process involved in transfer of patients back to their home state. This case also highlights the difficulty in connecting patients back to the community when patients of mental illness tend to wander off and travel to other states when they decompensate.

No. 135

Second-Generation Antipsychotic Use in Patients With Dementia and Comorbid PTSD: A Case Report and Literature Review

Poster Presenter: Lisa T. Do, D.O.

SUMMARY:

Background: Second generation antipsychotics (SGAs) are often prescribed off-label to individuals with PTSD and/or dementia, typically to address symptoms such as insomnia and agitation. There is significant literature reporting increased risk of stroke and all cause mortality in dementia patients taking SGAs. Limited research has been done regarding the use of SGAs to treat PTSD in patients with comorbid dementia or mild cognitive impairment. **Case:** We present the case of a patient whose dementia-related behavioral agitation and PTSD symptoms were well treated with risperidone. Additionally, we present a literature review regarding the use of SGAs to treat PTSD in dementia patients. Mr. J. is a ninety year-old man with a past psychiatric history of vascular dementia and chronic PTSD (related to his time as a WWII prisoner of war). His medical history is significant for hypertension and hyperlipidemia. He was recently admitted to a nursing home as his family was unable to care for him at home due to progression of his dementia. His last documented Folstein Mini-Mental Status Exam score was 18/30, consistent with moderate dementia. Shortly after admission, Mr. J. began displaying aggressive behaviors. He was seen swinging a clenched fist and threatening to kill another patient who had kicked him, and also believed that the staff tied him to his bed at night and tortured him. It was thought that these delusions were specifically associated with his PTSD and military history as a prisoner of war. When Mr. J. did not respond to behavioral interventions, geriatric psychiatry was consulted. His behaviors were initially stabilized on low dose quetiapine, but he began to decline again and refuse oral medications. Mr. J. was switched to orally disintegrating risperidone, which helped with both compliance and symptoms. After three months on risperidone, Mr. J. became less withdrawn. At time of last follow-up, he was noted to be enjoying visits from the chaplain as well as participating in groups and outings with his peers. He is no longer combative or experiencing persecutory delusions. **Conclusion:** There is limited literature regarding the use of SGAs to treat PTSD in dementia patients. It is generally recommended to avoid SGAs in this patient population due to increased risk of stroke and all cause mortality. However, limited other therapeutic options exist for behavioral symptoms in dementia patients when behavioral interventions are unsuccessful. We present a case of patient whose PTSD and behavioral symptoms were successfully treated with risperidone. It is important to weigh risks, benefits,

and potential side effects when considering initiation of SGA treatment in dementia patients.

No. 136

Does Dextromethorphan/Quinidine Improve Pseudobulbar Affect Symptoms in HIV-Associated Dementia Patients?

Poster Presenter: Mueen Ahmad, M.D.

SUMMARY:

Background: Pseudobulbar Affect (PBA) is associated with sudden outbursts of involuntary crying or laughing in patients with neurological disorders, without any sad or humorous event to trigger these emotional episodes. Previous research studies have demonstrated that PBA symptoms may improve with Dextromethorphan/Quinidine (DM/Q) treatment, which is the only FDA approved medication indicated for PBA symptoms in spite of the primary etiology of the symptoms. There is limited information regarding the prevalence of PBA symptoms in patients with HIV-associated Dementia (HAD) however, our previous research study conducted in the nursing home of Brookdale University Hospital Medical Center (BUHMC) showed a significantly high prevalence of 69%. To our knowledge, there is no previous study that assessed the improvement of PBA symptoms in HAD with DM/Q treatment. Objective: The primary aim of the study is to assess the efficacy of DM/Q on HAD patients who exhibited PBA symptoms. Methods: This IRB-approved, prospective study will monitor the improvement and progression of PBA symptoms of HAD patients who are on DM/Q as part of their treatment regimen using Center for Neurologic – Lability Scale (CNS-LS). The CNS-LS has been used as a measure of PBA symptom frequency and severity and has been validated in patients with ALS or MS. The CNS-LS does not confer a diagnosis of PBA, but rather suggests PBA symptoms that require further diagnostic evaluation. After informed consent will be obtained, the subjects that meet all the inclusion criteria will be included in the study. Data regarding demographic information, diagnosis, current medications, CNS-LS score before starting DM/Q (documented in the initial study), date of starting DM/Q, CNS-LS at 1 month, 3 months and respectively 6 months after starting the treatment will be collected. No personal information will be used and information will be entered in a password-protected Excel spreadsheet, accessed by the principal investigator and coordinators only. The data will be statistically analyzed to identify the difference in CNS-LS. Results: The study commenced in November 2016 and continues as we incorporate more patients from the initial study. Preliminary data suggests an improvement in CNS-LS scores by 6 months. In order to further validate the significance of the data, we will be adding more patients on DM/Q. The individuals who are found to have a 50% reduction in CNS – LS score will be considered responders and the individuals who are found to have less than 50% reduction in CNS-LS will be considered non-responders. This study will help the scientific community to better understand the effectiveness of DM/Q in HAD with PBA symptoms.

No. 137

First-Episode Psychosis in Immigrant Children and Its Management

Poster Presenter: Naeema Noor Hassan, M.D.
Co-Authors: Zohaib Majid, Asghar Hossain, M.D.

SUMMARY:

Childhood-onset psychosis is rare with insidious course and onset prior to the age of 12 years. The severity of positive and negative symptoms in acute episodes is predictors of significantly worse outcome. Often challenging to diagnose children present with a multitude of psychiatric disorders that may represent underlying depression, anxiety, posttraumatic states, and autism spectrum disorders or a secondary medical condition. The aim of this article is to report a rare case of first episode childhood psychosis in an immigrant and its management We present a case of a 12-year-old Asian male, who recently immigrated to the United States, brought in by EMS to Bergen Regional Medical Center emergency department for evaluation of progressively worsening visual and auditory hallucinations. According to his mother the patient had been “hearing voices and seeing an oval-shaped face with red eyes” appearing for the previous ten day. These visual hallucinations progressively worsened leading to a stark decline in school performance. As a result of his fear the patient would hide his head in his hoodie at school and home. No recent stressors were identified. The

school's counselor contacted the patient's mother recommending a psychiatric evaluation. The mother stated supernatural spirits possessed her son and only the power of prayer would heal him. He additionally experienced tactile hallucination stating, "someone was on top of me" resulting in feeling paralyzed and unable to talk for an hour. Due to the parent's cultural and religious beliefs, it became challenging to administer medication once a diagnosis was established. The patient was started on Risperdal 0.5 mg with good response. Review of literature has indicated childhood psychosis is part of a complex interaction between genetic, biological, psychological and social factors. There has been no definitive evidence suggesting superiority to the typical medication used in psychosis, however atypicals are preferred in children. Researchers have observed that schizophrenia is three times more frequent in immigrants than in native-born subjects. According to a study immigrants were at elevated risk for both non-affective and affective psychoses, but this varied by ethnicity.(7) In conclusion, we have observed a rare case of childhood psychosis and illustrated the importance of ruling out medical and psychiatric conditions before establishing a definitive diagnosis. The stress and hardship encountered particularly in first generation migrants reportedly predisposed them to a higher risk of mental ill health compared to the settled population. The dramatic change in environment especially in a developing child can have severe negative impact short and long term. In our observation, although it is established that childhood onset psychosis has a poor prognosis and requires a higher level of care to establish better long-term outcomes for children and adolescents.

No. 138

A Case of Cerebellar Ataxia Secondary to Lithium Toxicity

Poster Presenter: Naeema Noor Hassan, M.D.
Co-Authors: Javeria Sahib Din, Asghar Hossain, M.D.

SUMMARY:

Introduction Cerebellar ataxia is an injury to the cerebellum which commonly results in uncoordinated movements, altered mental status, nystagmus, dysarthria, tremor and proximal muscle weakness. One of the reasons of cerebellar ataxia is toxicity of lithium in patients who are taking it. Objective We are reporting a case of cerebellar ataxia induced by lithium toxicity. The objective is to highlight the neurophysiology of the changes involved in the brain secondary to lithium toxicity and their management by buspirone. Case "AA'' is a 68 years old, divorced, retired Caucasian female with a history of bipolar disorder and multiple medical problems i.e., hypertension, glaucoma, and depression. Patient has passive suicidal ideations and poor activities of daily living (ADLs). She smokes 1 to 1-1/2 pack cigarettes per day. The patient once set a fire in her apartment which caused smoke inhalation. Patient has no history of prior inpatient psychiatric hospitalizations. She has a history of lithium toxicity. Currently takes Xanax and Klonopin (0.5mg, BID). Patient has been followed by a psychiatrist and has no history of drug or alcohol abuse. Patient has no significant lab findings. On mental status examination, the patient appears older than her stated age, thin and emaciated. She has poor personal hygiene and appears disheveled. Patient has abnormal buccal, lingual and extremity movements. Gait is unsteady, speech is soft, slow, slurred at times, coherent and goal directed. Attention and concentration are poor. Alert, oriented to time, place and person. She appears anxious, depressed and withdrawn. Judgment and insight are limited. She has feelings of hopelessness and helplessness. Patient denies current suicidal or homicidal intent or plan. Patient scored 29 out of 30 on the mini mental status examination. Discussion Our case and reviewed literature indicate the association of cerebellar degeneration with lithium use. Neuropathological and histological destruction of Purkinje cells causes significant decrease concentration of 5-HT1A serotonin receptors. As a result, lithium toxicity is markedly improved by buspirone. Early detection of the signs of lithium toxicity is very important in terms of successful treatment and improvement of the quality of life in patients on lithium.

No. 139

Methadone and Buprenorphine Treatment in Pregnant Women and Its Effects on Neonates

Poster Presenter: Naeema Noor Hassan, M.D.
Co-Authors: Javeria Sahib Din, Asghar Hossain, M.D.

SUMMARY:
Background CDC reports an increase in the incidence rate of Neonatal abstinence syndrome(NAS) from 1.6 per 1000 to 6 per 1000 births from 1999 to 2013. It poses a financial burden on the health department. Methadone maintenance treatment is the preferred option for opioid dependent mothers during pregnancy. Some studies suggest buprenorphine should be the first line treatment during pregnancy. Methadone is an opioid receptor agonist and buprenorphine is a partial agonist at opioid receptor. Buprenorphine has less adherence for this receptor and hence has reduced effects of morphine. However, NAS from methadone requires prolonged hospitalization and treatment of the infant. NAS can cause effects on CNS, GIT, autonomic nervous system, respiratory symptoms etc. It can be hazardous if left untreated. These infants are irritable, have rigid muscle responses, high pitched cry, have a poor suck reflex and it is difficult to feed them. These symptoms can begin with 24 to 72 hours and last for 3 to 5 days approximately and sometimes for a longer duration. MDR1 gene has been associated with the severity of methadone withdrawal symptoms. Other factors such as tobacco exposure during pregnancy and breast milk also play a role in the severity of NAS symptoms. Objective The objective of this literature review is to highlight the effects of methadone and buprenorphine on neonates of addicted mothers. Pros and cons of both are discussed in detail. Method Literature from PubMed and Cochrane from the year 2000 onwards is reviewed. Results of the clinical trials comparing the two drugs are reviewed. Conclusion When buprenorphine is compared head to head with methadone in a clinical trial, treatment of NAS from methadone required a lesser amount of morphine, lesser days of stay in the hospital and lesser duration of treatment. However, results have been varied in previous studies. Buprenorphine has been superior in length and amount of treatment in RCT. In another study, methadone demonstrated more severe symptoms of NAS as compared to buprenorphine. More data is required to say with certainty which of these two drugs is superior to other for preventing or reducing NAS symptoms. It is an area of research.

No. 140

Comparing Buprenorphine and Methadone Treatment in Opioid Dependent Pregnant Women

Poster Presenter: Naeema Noor Hassan, M.D.
Co-Authors: Zohaib Majid, Asghar Hossain, M.D.

SUMMARY:
Background According to the CDC, drug overdose is the leading cause of accidental death in the United States, with 52,404 lethal drug overdoses in 2015, of those, 33,091 (63.1 percent) involved a prescription or illicit opioid.(1)The prevalence of opioid dependence during pregnancy increased from 0.17% (1998) to 0.39% (2011). (2)This epidemic has lead to higher rates of infection, premature delivery, and lower birth weights. Although methadone is the most commonly used treatment for opiate addiction during pregnancy it can have severe effects on the neonates from withdrawal, mainly neonatal abstinence syndrome (3). Methadone is a long-acting opioid primarily acting as a mu-receptor agonist, which crosses the placenta and may result in fetal dependence. Buprenorphine, a partial mu-opioid agonist and kappa-opioid antagonist, has low intrinsic receptor efficacy results in a less-than-maximal opioid effect and a diminished risk of overdose, as compared with methadone. CDC reported an increase in the incidence rate of Neonatal abstinence syndrome (NAS) from 1.6 per 1000 to 6 per 1000 births from 1999 to 2013. Studies have suggested buprenorphine should be the first line treatment during pregnancy (4). Objective The objective of this literature review is to compare Buprenorphine and Methadone treatment in opioid dependent pregnant women. Method Literature from PubMed, New England Journal of Medicine, American Journal of Obstetrics and Gynecology is reviewed. Conclusion Buprenorphine demonstrated advantages over methadone including a diminished risk of overdose, less abrupt withdrawal, and fewer drug interactions. In addition, buprenorphine may result in a reduction in the incidence and severity of neonatal abstinence syndrome when compared to methadone. (9) Studies demonstrated buprenorphine treatment during pregnancy was not associated with greater harms than methadone when compared. Additionally there has been moderately strong evidence indicating buprenorphine having lower risk of preterm birth, greater birth weight and larger head circumference.

(7). One study concluded maintenance therapy in an opioid-dependent mother with buprenorphine led to better outcomes when considering Neonatal Abstinence Syndrome and preterm birth while proving to be more cost effective compared to methadone.(8) It is difficult to definitively state with certainty whether buprenorphine is superior to methadone and further research is still required.

No. 141

The Role of Estrogen Supplementation in Premenopausal Women to Prevent Alzheimer's Dementia

Poster Presenter: Naeema Noor Hassan, M.D.
Co-Authors: Zohaib Majid, Asghar Hossain, M.D.

SUMMARY:

BACKGROUND Alzheimer's disease (AD) disproportionally affects females and males The female predisposition has been associated with the loss of ovarian sex hormones when menopause is reached.(1) Endogenous and exogenous estrogen influences many of the structural and functional aspects of the AD brain. Autopsy of an AD brain revealed marked atrophy focused in the basal forebrain and medial temporal structures. There has been evidence suggesting that the reduction in estrogen during the menopausal transition plays a role in developing Alzheimer's dementia later in life. (2). Estrogen helps to promote growth of cholinergic neurons which has antioxidant properties and promotes the growth and survival of these neurons increasing cholinergic activity while additionally increasing the nonamyloidogenic metabolism of the amyloid precursor protein.(3) Despite controversies, estrogen replacement therapy, when given prior to menopause has been shown to reduce the risk of AD in postmenopausal women.(4) The critical window theory speculates that estrogen has the most beneficial and effect on neurocognition when taken only in the perimenopausal period. OBJECTIVE The objective of this literature review is to investigate the role of estrogen supplementation in menopausal women to prevent Alzheimer's dementia Method: Literature from Pubmed, Google, and Wiley Online Library is reviewed Conclusion According to one study estrogens has an effect on brain tissues and processes in ways that might improve Alzheimer symptoms or may reduce the risk of developing Alzheimer's disease.(6) An observational longitudinal study compared the use of hormone therapy in both mid-life and late-life risk of dementia found that women using hormone therapy in mid-life (but not late-life) had a 26% reduced risk of a dementia diagnosis, while women using hormone therapy only in late-life had a 48% elevated risk compared to women not using hormone therapy at either time point. Women reporting hormone therapy use both in mid and late-life were not statistically different in dementia risk from women not using hormone therapy in mid or late-life. (5). Although promising, more research needs to be done to definitively establish weather estrogen supplementation in the perimenopausal and menopausal period.

No. 142

Aberrant Brain Functional Network Integrity in Adolescents With Insomnia

Poster Presenter: Sanghyun Kim
Co-Authors: Min-Hyeon Park, Subin Park, Bumhee Park, Bung-Nyun Kim

SUMMARY:

INTRODUCTION Adolescence is the a period of rapid brain development, and sleep is very important for the development of adolescent cognitive function, neuroimaging research in adolescents with sleep problems is currently less active than in adults. We investigated the whole-brain functional interactions and network organization of these interactions according to groups classified by insomnia severity. METHODS A total of 802 students between the 7th and 11th grade and their parents were asked to participate to this study. In total, 72 adolescents agreed to participate in this study. The adolescent who scored equal to higher than 8 in ISI total score were classified as insomnia group. The control group was defined as adolescents who scored equal to or lower than 7 in the ISI total score and those who do not have excessive daytime sleepiness symptoms as measured by the ESS scale (?7). We excluded the participants 1) who could not be classified in the insomnia group nor in the control group, 2) who did not complete the survey and 3) whose MRI data quality was too poor to analyze. Finally, data from 47 participants in the insomnia group and 15 participants in the control group were included for analysis. We used 3.0 Tesla MRI scanner. Each

subject was scanned using resting state fMRI protocol for 9.5 minutes. High-resolution T1-weighted images were also obtained from each subject. FMRI data were spatially preprocessed using SPM8, which included realignment of EPI brain volumes for removal of any potential head-motion, co-registration to T1-weighted images, and spatial normalization to a standard common space template using nonlinear transformation procedures. To construct functional network, we extracted fMRI time series from the 116 regions of the automated anatomical labeling map and further processing included regressing out confounding effects, despiking, and band-pass filtering (0.009–0.08 Hz). To improve normality, we converted individual correlation maps into z-scored maps with Fisher's r-to-z transformation. We compared the z-scored maps edge-by-edge between xxx and control subjects using analysis of covariance , with age and gender included as covariates to regress out age and gender-related differences. All resting state-FC analyses were performed using MATLAB-based custom software. RESULTS The resting-state FC differences between adolescents with insomnia and control groups are displayed in Figures 1. Some areas of FC showed negative correlations with the ISI total scores (Figure 2). CONCLUSION We showed several aberrant brain FC characteristics in adolescents with insomnia. These findings suggest that brain dysfunction in adolescents with insomnia extends to spontaneous resting conditions, and cognitive and affective deficits in adolescents with insomnia may stem from the altered FC and brain network organization, which may contribute to other psychiatric consequences and daily functional deficit associated with the condition

No. 143

Demographics, Prescribed Pharmacotherapy and Comorbidities of Disruptive Mood Dysregulation Disorder in Child and Adolescent Psychiatric Outpatients

Poster Presenter: Shayna Bailey, M.D.
Lead Author: Shayna Bailey, M.D.
Co-Authors: Kelly Blankenship, D.O., Russell Fridson, Evonne Edwards, Roseanne Mauch, Irene Warner

SUMMARY:
Objectives: Prior to the addition of Disruptive Mood Dysregulation Disorder (DMDD) to the DSM 5, Bipolar I Disorder (BD) was frequently diagnosed in children and adolescents with chronic non-episodic daily irritability, aggressive temper outbursts and trouble functioning across multiple settings. DMDD was added to the DSM5 in part to reduce misdiagnosis of BD and inappropriate medication management of children and adolescents. As DMDD is a new diagnosis, there are limited protocols guiding medication management of DMDD and a dearth of research discussing demographics, co-morbidities and treatment. This study discusses the demographics, prescribed pharmacotherapy and co-morbidities of children and adolescents diagnosed with DMDD in an outpatient setting. Methods: A retrospective electronic medical record review was completed of patients age 6-18 years who received a diagnosis of DMDD at Pine Rest Christian Mental Health Services outpatient clinics between January 2013 and December 2016 (N = 782). Age, ethnicity, sex, primary and secondary psychiatric diagnoses and prescribed pharmacotherapy were collected and analyzed using descriptive statistics and Chi-square goodness-of-fit tests. Results: Of those diagnosed with DMDD (n = 637), 29.7% were females and 70.3% male. Co-morbid diagnosis included ADHD (71.4%), Anxiety Disorders (30.3%), Autism Spectrum Disorder (ASD)(18.2%), Depressive Disorders (7.4%), PTSD (3.6%), OCD (3.5%), Conduct Disorder (2.5%), Substance Use Disorders (2.0%), Bipolar 2 Disorder (0.8%), Bipolar I disorder (0.2%), and Psychotic Disorders (0.6%). Of patients with a DMDD diagnosis (excluding those with a psychotic disorder, ASD, or bipolar diagnosis), 72.4% (n = 373) were prescribed were prescribed medication typically utilized for mood stabilization, including atypical antipsychotics (64.7%, n = 335), anticonvulsants (21.7%, n = 112) and/or Lithium (2.5%, n = 13). These patients were prescribed SSRIs/SNRIs at a significantly lower rate, ?2(1, N =515) = 153.93, p < .001, with SSRIs/SNRIs prescribed to 48% (n = 247). Twelve percent (n = 61) of patients with a diagnosis of DMDD were prescribed an SSRI/SNRI without a mood stabilizer and 36.3% (n=187) were prescribed a mood stabilizer but not an SSRI/SNRI during that time period. Sixty-three percent were prescribed stimulants (n = 323), 38% (n=194)an alpha- 2 adrenergic receptor agonist, and 9.5% (n=49) atomoxetine. Conclusions: This population of child

and adolescent patients diagnosed with DMDD were approximately two-thirds male. They had high rates of co-morbidity of ADHD, ASD and anxiety disorders. Almost three-fourths of the patients in this sample who were diagnosed with DMDD without co-morbid ASD, psychotic disorders, or bipolar disorders were prescribed a mood stabilizer, including almost two-thirds who were prescribed an atypical antipsychotic. Almost two-thirds of the patients were prescribed were prescribed an SSRI/SNRI.

No. 144

Tranquility of Clonidine

Poster Presenter: Sheldon Brown, M.D.

SUMMARY:

Adults with ADHD have patterns of psychiatric comorbidity and neurocognitive deficits similar to children however due to their responsibilities they suffer a far greater functional impairment. Ideal treatment needs to be effective, as the consequences of adult ADHD pose such a great risk. This is a case of a highly functional patient with ADHD, managed with Adderall 10 mg Qam. The course of treatment was complicated by sleeping difficulties different from insomnia, associated with stimulant usage. The patient admitted to having frequent dialogues with herself, of a non-psychotic nature, about previous-current things, such as conversations and various interactions. The patient also endorsed having her mind occupied with random spelling and other distracting thoughts. A small dose of Clonidine was prescribed which not only helped to induce sleep but it also significantly stopped her internal dialogues and thought distraction. After an online review of ADHD, it's evident that there are similar patients with the exact presentation of a continued internal dialogue, however there is limited use of the medication Clonidine in these cases. This case is meant to inform my fellow colleagues on the potential tranquility benefits of Clonidine within this population of patients.

No. 145

The Sweetest Decay: A Case Report on an Adolescent Female With Type I Diabetes Mellitus and Suicide Attempts by Insulin Misuse

Poster Presenter: Shynney Marie Munar

SUMMARY:

Given the turbulence of adolescence, adhering to Type I Diabetic management can be precarious, with the demanding, multi-component regimen, comprising of multiple insulin injections, dietary control, and monitoring of blood glucose. Studies showed that 30% of adolescents with Type I Diabetes experienced coping difficulties, feelings of sadness and withdrawal from peers. A tenfold increase in suicide and suicidal ideation was found, with insulin overdose by secret self-administration as the most common method. In the Philippines, there are no published nationwide prevalence or incidence studies on Type 1 diabetes with co-morbid depression in the youth. The case presented multifactorial facets of depression and diabetes leading to noncompliance to both medical and psychiatric treatment leading to suicide. The assessment of Major Depressive Disorder, recurrent was made by thorough review of the psychiatric history and laboratory work up, in accordance with the Diagnostic and Statistical Manual (DSM5). A biopsychosocial approach was done to elucidate the complexity of the case factoring in the adolescent storm, vicious cycle of diabetes and depression and effect of enmeshed attachments. Additional screening tools administered: Diabetes Self Management Questionnaire (DSMQ) and Problem Areas in Diabetes Questionnaire (PAID), showed suboptimal self-care and emotional burn out, respectively. Management involved short-term and long-term goals, focusing on psychoeducation about the nature and course of depression, psychiatric impact of depression leading to noncompliance, suicide precaution and treatment plans through psychopharmacology and psychotherapy (Individual and Cognitive behavioral), family therapy, liaison with the Pediatric Endocrinology and Nutrition service and support group involvement.

No. 146

A Longitudinal Case Study of ADHD: Identifying Aces and Opportunities for Intervention

Poster Presenter: Vanesa Del Pilar Disla, M.D.
Co-Authors: Matthew W. Grover, M.D., George Alvarado

SUMMARY:

Attention-Deficit/Hyperactivity Disorder (ADHD) is a common psychiatric diagnosis of childhood. The CDC estimates that 11% of all children between the ages of 4-17 have been diagnosed with ADHD as of 2011. Individuals with ADHD experience increased psychiatric morbidity and poor health outcomes as compared to individuals without ADHD. Recent studies have also indicated that children with ADHD have higher exposure to adverse childhood experiences (ACEs), traumatic events before the age of 18 that are experienced as physically or emotionally harmful or threatening, as compared to children without ADHD. A recent study by Brown, et. al. demonstrated an association between the total number of ACEs and moderate to severe ADHD. ACEs can also cofound the patient's diagnosis, as some symptoms common to ADHD may also be indicative of an underlying trauma history. Careful identification of ACEs by pediatricians and psychiatrists can provide an opportunity for further diagnostic clarification and intervention. We present a case of a 15 year-old male with a diagnosis of ADHD and multiple ACEs who was evaluated in the SBH Health System Emergency Department (SBH ED). We will review the association between ACEs and ADHD, possible confounders to the ADHD diagnosis, and point out areas for future intervention.

No. 147

Off-Label Uses of Clozapine in Children and Adolescents: A Literature Review

Poster Presenter: Vivekananda R. Rachamallu, M.D.
Lead Author: Manish Aligeti, M.D., M.H.A.
Co-Authors: Benjamin W. Elberson, Ph.D., Emily Vutam

SUMMARY:
Clozapine is an atypical antipsychotic approved by the FDA in 2002 for treatment-resistant Schizophrenia and reduction in risk of recurrent suicidal behavior in patients with Schizophrenia or Schizoaffective disorder. Due to the risk of seizures, myocarditis, and the uniquely high risk of agranulocytosis, its prescription is tightly regulated. However, clozapine remains highly effective at treating psychotic symptoms in severely ill patients when multiple antipsychotics have failed. However, there are no FDA indications for the child and adolescent population. The prevalence of early onset Schizophrenia (EOS) is increasing, as is the rate of self-injurious behaviors in children and adolescents. The reason for this increase in EOS is still unclear and likely multi-factorial; it may be due to changing psychosocial factors and rates of substance use. Clozapine has a known role in clinically challenging situations and, as we discuss, can provide significant benefits to treatment-resistant disease. Pediatric patients typically recover with clozapine but do so with an increased risk of chronic and debilitating side effects like metabolic syndrome relative to the adult population. It is therefore helpful to have a summary of clear indications and rationale for when to use clozapine and when it is not indicated and carefully monitor patients for adverse effects. The PubMed database was searched using a date restriction of 1990 to 2017 and including the following keywords: Clozapine, Child, Adolescent, Pediatric, Off-label, and Behavioral. Though it is off-label and relatively few studies exist, we find that there is strong support for the use and relative safety of clozapine in pediatric patients exhibiting behavioral and/or psychotic symptoms. In spite of increased use of antipsychotics in child and adolescent population in clinical practice, there are no recent review articles published focusing on uses of clozapine. Specifically, aggressive, disruptive, or irritable behavior – as well as early-onset Schizophrenia with or without a mood component – is effectively treated with clozapine both in short-term and long-term courses in refractory patients. This population stands to receive significantly greater benefit from clozapine therapy compared to other antipsychotics when criteria are met, thereby limiting long-term morbidity and increasing a patient's functional abilities. While the risk of side-effects is greater in this age group, the benefit outweighs the risk in all found articles.

No. 148

Parenting Styles and Social Skills of School-Aged Children With Attention-Deficit Hyperactivity Disorder (ADHD)

Poster Presenter: Weeranee Charoenwongsak, M.D.

SUMMARY:
Background Social impairment is not part of diagnostic criteria of attention-deficit hyper activity disorder (ADHD), but is strongly associated with the

condition and still often persists after treatment of primary symptoms through medication and behavioral therapy. Interactions between parents and child, particularly parenting styles, have been found to be associated with wide-range of outcomes in child's life, but very few studies have been conducted in investigating its association with child's social impairment. Objective To examine the association between parenting styles of primary caregivers and social skills of children with ADHD. Methods We investigated the association in a sample of children (6-12 years of age) ,who were diagnosed with ADHD and have received treatment at Southern Institute of Child and Adolescent Mental Health in Surat Thani, Thailand, through questionnaires. Cross-sectional statistical analyses, including Pearson correlation, were used to examine the association between parenting styles and social skills of children with ADHD. Results Total of 221 participants were analyzed; There are a negative correlation between neglectful parenting style and participant's self-control, problem-solving skill, and conflict resolution skill ($p < 0.05$) and a positive correlation between authoritative parenting style and participant's self-confidence ($p < 0.05$) while controlling for primary caregiver sociodemographic factors (marital status, education level, and income), participant's length of received treatment, and medication adherence. Conclusions Neglectful parenting style has been found to be negatively associated with participant's self-control, problem-solving skill, and conflict resolution skill, while authoritative parenting style has been found to be positively associated with participant's self-confidence.

No. 149

Chart Review of Five Patients With Prolonged Boarding Status in the Emergency Department: A Case Series

Poster Presenter: Yohanis Leonor Anglero Diaz, M.D.
Co-Authors: Michelle P. Durham, M.D., M.P.H., Pamela Hoffman, Kathleen R. Donise, M.D.

SUMMARY:

Emergency departments have experienced an increase in volume of visits, leading to overcrowding and prolonged waiting, increased morbidity and mortality and decreased patient satisfaction .One of the leading causes of emergency department overcrowding is boarding patients in the ED. While not standardized, boarding is waiting 6-24 hours and beyond following a completed evaluation, after the decision to admit or transfer a patient, which cannot be completed due to lack of available beds. Mental health visits constitute about 5% of pediatric ED visits and psychiatric patients are 4.78 times more likely to board in ED than non-psychiatric patients. Although boarding has become common among emergency departments, it seems some patients wait for prolonged periods of time in the emergency department even in comparison to other boarders. There are no formal guidelines on how to identify and address this situation in terms of access to care while patients are waiting for beds. The purpose of our study was to identify the average length of stay for patients during a period of 1 year in an urban academic hospital without a psychiatric unit and to review charts of patients who had the most extended boarding period, seeking to identify factors that could have contributed to extended stay. We obtained retrospective data from charts of all patients who presented to the pediatric ED and required a psychiatric evaluation. IRB approval was obtained and limited data set was provided by institution. Data reviewed included date of presentation, insurance, disposition, psychiatric evaluation and progress notes. We reviewed charts of the 5 patients with the longest length of stay (5 of 461). Results: The average total length of stay in the ED was 1.20 days. The 5 patients who had the longest length of stay ranged from 5.04 to 7.13 days. All presented between January and April and between Thursday and Saturday.3 patients were unable to be transferred due to insurance-related factors. 2 patients were declined due history of aggression. Only 1 patient was transferred to a psychiatric facility while the other 4 were d discharged. In contrast, 58% of patients who boarded between 1.20 days and 5 days were transferred. Conclusions: While the average length of stay in the ED was 1.20 days, some patients waited up to 6 times longer. Factors identified among them include presenting at the end of the week or during January through April and being declined from facilities due to insurance factors or acuity. Most extended boarders were discharged, not transferred to a facility. Identifying factors

associated with extended boarding will lead to advocating for increased resources during times of high utilization and implementing guidelines to improve treatment for patients while boarding in the ED, considering that most do receive treatment in a psychiatric facility but instead their treatment is administered in the ED.

No. 150

Autism Risk Factors: A Study on Autism Spectrum Disorder Population in Las Vegas Metropolitan Area

Poster Presenter: Nina Parikh

SUMMARY:

Autism Spectrum Disorder (ASD) is a chronic condition with varying degrees of impairment and social and behavioral function. Studies show 1 in 68 children have been diagnosed with ASD in this past year. Diagnosis is often made through clinical evaluation paired with a history and observation from the patient's family, all of which are subjective. Despite the growing prevalence of ASD, there is a lack of evidence based data correlating various risk factors with ASD. Our objective is to examine these risk factors associated with ASD population in the greater Las Vegas area. We accessed medical records from the Center of Autism and Developmental Disabilities at Touro University Nevada, that were diagnosed by one neuropsychologist from January 2004 to April 2015 (n=132). We recorded patient's sex, race, family history of; ADHD, ASD, and Learning disability, delivery methods, birth weight, mother's age, mother's income and level of education. We then compared family history of behavioral disorder on the maternal side vs paternal family history and found maternal side risk to have p=.0009. The increasing risk with maternal age over 30, p=.003, specifically between the ages of 31-35 vs. 36-40, p=.001. When comparing risk of Autism and level of maternal education, p= .78. The risk of Autism with family income <$50,000 vs >$50,000, p=.90. The data in comparing between c-section vs vaginal delivery with risk of Autism, p=.32. Retrospective analysis of medical records of 132 patients attending Touro University Nevada Center for Autism and Developmental Disorders (CADD) revealed that, there was a statistically significant correlation of increased risk of ASD in women over the age of 30 specifically from ages 30-34. This finding furthers results conducted from other studies done in Israel, Norway, Australia and Denmark. We also found a significant correlation between maternal family history of ADHD, ASD and learning disabilities more than if the child had family history on the paternal side. This is a novel finding and could have a greater social impact on likelihood of pregnancy in populations with family history. However, we have found no statistical correlation with those that were of lower socioeconomic status, maternal level of education and increased risk of Autism Spectrum in their children. No significant correlation of increased risk of ASD in children that had been delivered by cesarean section versus normal vaginal delivery. Despite other research showing correlation of cesarean sections with ASD, our data found no statistical significance in this aspect. Our primary focus in this study is to narrow the gap between general perception of ASD associated risk factors and that of statistically significant findings, which will help better understand the ASD risk factors and develop novel management strategy.

No. 151

WITHDRAWN

No. 152

Reactive Attachment Disorders: A Case Study and Literature Review

Poster Presenter: Stephanie Carbone

SUMMARY:

LB is a 4yo male with a history of severe neglect and attention deficit hyperactivity disorder who presented to the outpatient clinic with his step-mother and newly assigned social worker for complaints of behavioral disturbances. Throughout the interview, LB was noted to get extremely close to the social worker he met only minutes before. This intense attachment, combined with his history of severe neglect provided evidence for a possible attachment disorder. First formally defined in DSM-III, the attachment disorders are comprised of patterns of social behaviors that are markedly disturbed and developmentally inappropriate compared to what is viewed as culturally normal. Until the advent of DSM-5, two types were noted: withdrawn type and disinhibited. Although research has been fairly limited, recent studies have shown

marked differences in the two types, especially in relation to response to intervention. Current diagnostic guidelines now present two distinct disorders: reactive attachment and disinhibited social engagement. This case provides a unique opportunity to look at the impact on patient diagnosis. There are no current case studies on the attachment disorders, let alone making the distinction between the two new diagnoses. Furthermore, research on interventions is at this time extremely limited. The aim of this case is to review what is known about the attachment disorders, provide a framework for diagnosis, and discuss potential interventions particularly as it related to this patient.

No. 153

Case Series: Two Pediatric Patients With Depakote-Induced Blood Dyscrasias

Poster Presenter: Tamara Murphy

SUMMARY:

Depakote (generic: valproic acid or VPA) is a commonly prescribed drug in neurologic and psychiatric medical practices. Its indications include seizure disorders, migraine prophylaxis, and mania. This case series outlines side effects experienced in two pediatric patients prescribed Depakote to treat behavioral symptoms related to Autism Spectrum Disorder (ASD). Depakote acts by increasing the availability of GABA, an inhibitory neurotransmitter, to neurons in the brain (1). Blood dyscrasias are a known potential side effect of Depakote, but researchers are divided on how commonly they occur. Depakote has been known for about 30 years to impair homeostasis, and its effects appear to be dose-dependent. The clinical relevance of this impairment is still controversial. Mild neutropenia and acquired von Willebrand Syndrome (avWS) type I are two of the blood production problems described in the literature (2). Neutropenia usually occurs within the first few weeks of exposure to Depakote and is usually both mild and transient. Reports of neutropenia after Depakote administration are limited in the literature (2). Data on acquired avWS from Depakote are contradictory, and researchers disagree on its exact mechanism and frequency. At least one institute found Depakote-associated coagulopathies to be a frequent finding in its pediatric population (3). Experiments with umbilical cord blood have shown that myeloid progenitor cells are affected by in vitro exposure to Depakote. Terminal differentiation is significantly reduced with continuous drug exposure. Leukocyte subsets are affected differentially, including significantly absolute neutropenia and significantly absolute lymphocytosis. Lymphocyte subsets are also affected, indicating that hematopoietic stem cells or multipotent progenitor cell subsets are impacted by the drug (4). Our case series involves two male pediatric ASD patients who developed hematologic side effects from Depakote. These two cases arose from a practice that serves a pediatric patient population of approximately 500. Patient one developed mild neutropenia and patient two experienced avWS. For the first patient, there was some debate whether the neutropenia could be described by an autoimmune process. We assert, however, that the patient's concomitant mild absolute neutropenia and absolute lymphocytosis are consistent with the effects of Depakote on blood production, as already described within in vitro and in vivo studies. We performed linear regression analysis with SPSS, which showed significant correlation between Depakote dosage and levels of absolute neutrophils and absolute leukocytes in patient 1. For patient 2, vWS testing was consistent with drug-induced avWS, and the patient's symptoms and labs normalized upon discontinuing Depakote. We hope that this case series will add to the discussion of the effects of Depakote on blood production in pediatric patients and their impact on psychiatric and medical decision-making.

No. 154

Case Series: Use of a Combination of Mood Stabilizers in a Pediatric Population With Disruptive, Impulse-Control, and Conduct Disorders

Poster Presenter: Tamara Murphy

SUMMARY:

The DSM 5 describes patients with diagnoses falling under the category Disruptive, Impulse-Control, and Conduct Disorders as having difficulty with self-control of behavior and emotions. Treatment for these conditions is multimodal and includes psychosocial and pharmacological interventions, which are saved for patients for whom symptoms

persist or worsen. To date, few studies have focused on medical treatment of pediatric patients with these disorders. There are no medications licensed specifically for medical treatment of disruptive behavior disorders, but medications have increasingly been used clinically to treat them, largely selected based on comorbidities and side effect profiles (1). Most data so far focuses on treatment with methylphenidate and risperidone. Other antipsychotics have shown efficacy, and there is some evidence that mood stabilizers and other classes may have an effect (2). Mood stabilizers have been investigated in a small number of clinical studies, especially in the treatment of conduct disorder (CD), which showed a moderate reduction of aggressive behaviors. Lithium and depakote are the two most-studied medications to date for CD within this class. There is limited data on typical antipsychotics such as thorazine, but one study described them as having a moderate effect (3). This case series follows the pharmacological treatment of children with Disruptive, Impulse-Control, and Conduct Disorders who were inpatients at a Psychiatric hospital in Huntington, WV under the care of a Child/Adolescent Psychiatrist. Patients within this category of disorders were selected for chart review who had been prescribed one of three medications as first monotherapeutic agent to help stabilize disruptive outbursts: lithium, depakote, or thorazine. After titration of the first medication, patients still experiencing disruptive behavior were given an additional agent and titrated to efficacy. For some patients, a third medication was added. Charts were reviewed for a six-month period for each patient selected for inclusion, and qualitative and quantitative data was gathered and analyzed. Final results are pending, but preliminary results indicate a decrease in outbursts in the selected population with the above-mentioned medications. It is our hope that this case series will add to the data available for the ability of mood stabilizers and typical antipsychotics to reduce disruptive behaviors in children and adolescent patients receiving inpatient treatment for CD.

No. 155

Diagnostic Dilemma: Just an Obsession or a Debilitating Delusion: A Case Report of Successful Treatment of Schizo-Obsessive Disorder

Poster Presenter: Sagarika Ray, M.D.
Lead Author: Harjasleen Bhullar Yadav, M.B.B.S.
Co-Author: Adam Michael Fogel, D.O.

SUMMARY:
Objective: The term Schizo-obsessive has been known to us since the 19th century, but it has not yet been classified as a diagnostic category in DSM-V. Schizo-obsessive is viewed as the presence of obsessive-compulsive symptoms (OCS) in a patient with either prodromal / active or residual schizophrenia among other criterions suggested by Poyurovsky et al in an article published in 2012. Our case presents a case report of an adolescent patient with likely Schizo-obsessive disorder treated successfully with the combination of a Cognitive Behavioral Therapy (CBT) and Fluoxetine with Aripiprazole at the very outset of the presentation. Our case report focuses on the need for proper diagnosis and establishment of a separate diagnostic category for Schizo-obsessive disorder in DSM-V in order for the timely and accurate pharmacological and social intervention and also focuses on the role of atypical antipsychotics as a treatment modality in such cases. Method: Our patient is a 16 YO Male with a prior history of OCS since the age of 6, and learning disability who presented to us with a swollen left hand, clenched fist, inability to use left hand, deteriorating grades, malodorous, thought disordered, refusing medications with poor insight and negative symptoms which included social withdrawal, diminished speech and avolition. His inability to use the left hand was due to an incident that happened in 2015 when semen from masturbation touched his left hand leading him to be delusional about the hand being contaminated in spite of repeatedly washing the hand. This episode was consistent with schizo-obsessive subtype. Patient scored 24 on Yale Brown Obsessive Compulsive scale, and 33 on Brief Psychiatric Rating Scale. CBT and Fluoxetine were initiated to treat the OCS part and Aripiprazole was added to treat the prodromal phase of Schizophrenia part of the Schizo-obsessive subtype. Results: Patient had failed CBT modality before presenting to us, which was attributed to the existence of untreated prodromal phase of Schizophrenia. Patient showed drastic improvement on the Aripiprazole combined with Fluoxetine provided right at the outset. Conclusions:

We propose that Schizo-obsessive subtype should be added as a separate category in DSM –V in order to enable early identification of psychopathology, and initiate accurate intervention.

No. 156

Understanding Different Treatment Modalities of Trichotillomania and Comorbid ADHD: A Case Report

Poster Presenter: Sagarika Ray, M.D.
Lead Author: Leena Mohan, M.D.

SUMMARY:

Objectives: Trichotillomania (TTM) is a debilitating disorder also known as hair-pulling disorder classified in DSM V as an obsessive-compulsive disorder. It is characterized by repetitive compulsive hair pulling resulting in hair loss which could lead to significant social impairment. Trichotillomania has been viewed as an internalizing disorder or a variant of obsessive-compulsive disorder (OCD). It is known that genetic and environmental risk factors for trichotillomania and OCD are shared within the spectrum of these disorders. Our case describes a 13 year old Caucasian girl who has extensive genetic loading of OCD, ADHD and Depression in her family/ siblings. Our report focuses on not just different treatment modalities of trichotillomania; but also extends to the treatment of co morbid conditions that co exist. Methods: Patient in our specific study failed treatment with an SSRI but responded well to Clomipramine combined with Habit Reversal Therapy. During the course of treatment Clomipramine levels were monitored which were noted to be supra therapeutic. Our case report also reflects on successful treatment of co morbid ADHD without any worsening of trichotillomania symptoms. Results: During the course of treatment it was conclusive that patient did not show any signs of toxicity in spite of having supra therapeutic levels of Clomipramine. Evidence demonstrates that people with varied genetic polymorphisms metabolize Clomipramine in different ways. Our case report also reflects on identification of ADHD symptoms that was unmasked upon treatment of Trichotillomania and subsequent successful treatment of co morbid ADHD without any worsening of trichotillomania symptoms with treatment of stimulant medication. Conclusions: It is interesting to notice that biological underpinnings of OCD and trichotillomania are strongly related and co exist very commonly with other psychiatric disorders like ADHD. Our particular case report reflects on successful treatment of trichotillomania and co morbid ADHD. It also sheds light on the supra therapeutic levels of Clomipramine which may not always result in toxic symptoms in individuals; since varied genetic polymorphisms metabolize Clomipramine differently.

No. 157

Managing Psychiatric/Behavioral Problems in a Patient With Chromosome 18 Deletion Syndrome

Poster Presenter: Ambika Kattula, M.B.B.S.
Co-Authors: Fei Cao, M.D., Ph.D., Jaskirat Singh Sidhu, M.D.

SUMMARY:

Ms. G is an 18 year-old Caucasian female. She was transferred from a general hospital into our inpatient psychiatric unit due to a suicidal attempt and multiple psychiatric problems. She has a past psychiatric history of bipolar I disorder, schizophrenia, Borderline personality Disorder, Generalized Anxiety Disorder, Autism Spectrum disorder, Intellectual Disability, and a past medical history of gastroesophageal reflux disease (GERD), hypothyroidism and epilepsy. In 2015, she received genetic testing and then was diagnosed with chromosome 18 deletion syndrome. Patient and her two siblings were adopted by her current parents when patient was 3 years old because of child neglect from their biological mother. Apart from her siblings, patient gradually developed multiple psychiatric/behavioral problems as she grew up. As a result, her parents had to send her to a group home 3 year before. Recently her psychiatric/behavioral problems became more severe and she could not get along with her peers and staffs in group home. She also felt that her parents abandoned her, which made her very upset and frustrated. Two weeks before, she made a suicidal attempt by jumping from the 2nd-floor of the group home and broker her spine at the level of T4-5 with minor compression fracture. Patient was sent to a general hospital and received conservative treatments for 2 weeks. After her medical problems were stabilized, she was sent to our inpatient unit for further psychiatric and

behavioral managements. On admission, patient continued to report suicidal and homicidal ideation (patient wanted to take revenge on her family members), auditory hallucination, paranoid delusion, depression, and generalized anxiety. She was then resumed on Depakote (500mg QAM PO and 1000mg QHS PO) for mood, olanzapine (10mg Daily PO) for psychosis, levothyroxine (125 mcg Daily PO) for hypothyroidism, lamotrigine (25mg BID PO) for epilepsy prevention, Pantoprazole (40mg Daily PO) for GERD, Docusate (100mg BID PO) for constipation. Several days later, patient's psychiatric and behavioral problems seemed to be well under control. And her Depakote level was 68. However, one night all of sudden, patient performed very aggressive behaviors, temper tantrum, and tried to bite herself and medical staffs without any cause. This poster will discuss how to manage complex psychiatric and behavioral problems in a patient with chromosome 18 deletion syndrome.

No. 158

Prevalence, Sociodemographic Factors, and Clinical Correlates of Smoking in the First-Episode and Drug-Naïve Male Schizophrenia Patients

Poster Presenter: Abdullah Bin Mahfodh, M.D.
Co-Author: Fei Cao, M.D., Ph.D.

SUMMARY:

Background: Numerous studies have demonstrated chronic schizophrenia have significantly higher prevalence rates of smoking than either general population or patients with other mental illnesses. However, few systemic studies have investigated tobacco use in the first episode and drug naive (FEDN) schizophrenia patients. This study was to investigate prevalence, and relevant risk factors of smoking and its clinical correlates in the FEDN male schizophrenia patients from a Chinese Han population. Methods: Each participant filled in a detailed questionnaire that recorded general information, sociodemographic characteristics, smoking behaviors, and other medical and psychological conditions. Meanwhile, patients' psychiatric symptoms were assessed using the Positive and Negative Syndrome Scale (PANSS) scores. Smoking data from the 2010 Global Adult Tobacco Survey in China was utilized as the comparison reference. All participants were divided into groups based on their smoking history. Non-smokers were defined as individuals who had smoked less than 100 cigarettes during their whole lifetime. Current smokers were defined as persons who smoked more than one cigarette each day and have smoked for more than 1 year. Results: There were 156 FES male schizophrenia patients participating in this research, among which 50 patients (32.1%) were current smoker, and 106 (67.9 %) as never smoker. Indirectly Standardized Prevalence Ratios of current-smoking patients are significantly lower than ratios from general population (mean ratios=0.60% with 95%CL 0.45%-0.80%). For current FEDN schizophrenia smokers, their age (30.1±9.68 VS 23.09±6.46), education (8.88±4.31 VS 10.29±3.65), age of the first episode onset (28.39±9.65 VS 21.83±6.30), and marriage (x2 = 22. 21, df=2) demonstrated significant difference (all $p < 0.05$) when compared with their non-smoking peers, but no significant difference (all p ? 0.05) in the duration of 1st episode (2.02±1.35 VS 1.84±1.25), BWI (Body Weight index, 21.20±2.73 VS 21.41±3.53), ratios of waist/hip (0.86±0.053 VS 0.84±0.077), PNASS total scores (75.34±18.61 VS 82.72±22.04), PNASS-Positive Scores (19.98±6.97 VS 21.92±8.08), PNASS-Negative Scores (19.80±7.30 VS 21.31±8.78) and PNASS General Psychopathology Scores (35.56±10.71 VS 39.30 ± 11.86). Furthermore, multiple logistic regression showed that only education showed significant difference (OR=0.884, 96%CL=0.789-0.989) between current smokers and non-smoker in our FEDN schizophrenia patients. Conclusion: These results suggest that smoking prevalence in the FEDN male schizophrenia patients was significantly lower than general Chinese population. Only less education could contribute to risks of smoking in the FEDN patients.

No. 159

How Understanding Brain Hypothyroidism Can Improve the Management of Treatment-Resistant Depression

Poster Presenter: Aboelezz Mahmoud Kalboush, M.B.B.S.

SUMMARY:

Over the last 60 years T3 has been used with patients resistant to treatment with different Antidepressants , but the mechanism of action of T3

stayed unknown so far. According to the researches published in some endocrinology journals ; T3 in fact compansates its deficiency in the brain which is a condition called : (brain hypothyroidism) that means deficiency of thyroid hormones in the brain while their levels in the blood are within normal ranges. This medical condition - brain hypothyroidism - happens when different transporters and enzymes involved in the metabolism and utilization of thyroid hormones in the brain are not functioning appropriately. From the clinical point of view , patients with brain hypothyroidism suffer from psychological and mental symptoms which are not easily differentiated from the usual depressive symptoms , but treating those patients with different antidepressants doesn't help and leads to the resistance to the treatment as those patients need T3 , and this may explain why they respond to T3 when added to the antidepressants as augmenting treatment. Understanding the concept of (brain hypothyroidism) can improve the methodology of its detection which can help millions - or even tens of millions - of depressed patients all over the world to be diagnosed - and hence treated - earlier than what happens in clinical practice currently.

No. 160

Clinical Characterization, Mechanisms of Neuropsychiatric Disease in Hyperamonemia and Chronic Urea Cycle Disorder: Longuitidinal Study

Poster Presenter: Ahmed M. Maher, M.D.

SUMMARY:

Urea cycle disorders are metabolic disorder that is characterized with impairment in nitrogen metabolism with resultant accumulation of ammonia in blood and brain. Acute neurologic damage can happen in the acute presentations, with lethargy, vomiting, altered mental status, ataxia, astrexis, brain edema, hypothermia, seizures and coma. Partial enzyme deficiency can result in hyperactive behavior, self-injurious behavior, stroke like episodes and psychiatric symptoms. Glutamatergic models of psychosis propose that dysfunction of N-methyl-D-aspartate (NMDA) receptors, and associated excess of glutamate, may underlie psychotic experiences in people with schizophrenia. However, little is known about the specific relation between glutamate and auditory verbal hallucinations (AVH) in patients with psychosis. In this study, levels of glutamate+glutamine (Glx) in the left lateral prefrontal lobe were determined using proton magnetic resonance spectroscopy (1H MRS) to calculate their association with AVH. The higher Glx levels in patients with lifetime AVH as compared to patients without lifetime AVH suggest a mediating role for Glx in AVH. Our results are consistent with a previous study that found similar decreased levels of Glx in patients with schizophrenia, and increased levels in an AVH group as compared to a NoAVH group. The role of the glutamatergic system deserves further investigation, for example in different brain regions and in relation to clinical variables (Prog Neuropsychopharmacol Biol Psychiatry. 2017 Aug 1;78:132-139) This is a poster reviewing data collected through a longitudinal study from the Urea cycle disorder consortium, about the most common psychiatric presentation for urea cycle disorder patients across multisite data collection.

No. 161

Methionine Synthase Deficiency and Psychosis With Behavioral Outbursts: A Case Study

Poster Presenter: James Preston Ebaugh, M.D.
Co-Authors: Carol Lim, M.D., M.P.H., Samuel Isaac Kohrman, M.D., Barbara Wilson, M.D.

SUMMARY:

Background: Deficiency of methionine synthase results in elevated levels of homocysteine, which could result in mental retardation and psychosis. Homocysteine has been widely researched for its role in neuropsychiatric disorders and mental disorders such as major depression, bipolar disorder, schizophrenia, and schizophrenia-like psychosis. Studies have found elevated levels of homocysteine in young male schizophrenia patients but not in older males or females. Managing psychosis and behavioral problems in a young male patient with methionine synthase deficiency will be explored in this case study. Case History: A 22 year old Caucasian male with Methionine Synthase Deficiency (cobalamine G defect) presented with uncontrolled aggressive behavioral outbursts in the context of noncompliance with medication. His violence is often associated with misunderstanding due to true

delusions and hallucinations. Starting him on risperidone worsened his behavior, which is expected especially when patient do not regularly take their IM methyl cobalamin or hydroxy cobalamin (forms of B12). Patient complained of having “brain issues” and constantly requested a CT scan. He endorsed symptoms of depression with associated psychomotor slowing. He also complained of tingling in hands and feet, which did not respond well to gabapentin, but responded to Pregabalin. Patient also received a monthly injection of Invega Sustenna up to 234mg, which seemed to improve his behavior and psychosis. Plan is to transition to Invega Trinza. Low dose risperidone was given as well as duloxetine, atamoxetine, and propranolol. Conclusion: This case demonstrate how methionine synthase deficiency and high homocysteine plasma level contribute to worsening psychosis especially when the patient is noncompliant with medication. It is crucial to take both medications and antipsychotic to manage the patient. Antipsychotic alone may worsen the behavioral issues. This case provides more insight into the connection between methionine synthase deficiency and psychosis in a young male. It would be interesting to delve into neurobiology of homocysteine causing psychosis and behavioral issues.

No. 162

Immune Signatures and Clinical Course in Schizophrenia

Poster Presenter: Charles Wintour Shaffer, M.D.

SUMMARY:

The pathophysiology of schizophrenia is incompletely understood. A neuro-inflammatory component to the disease has been postulated at various times in the past, and interest in this area has recently increased across multiple domains of inquiry. To address the need for further information on immune mechanisms in schizophrenia as well as the demand for biomarkers in the clinical setting, we used a multiplex assay to characterize a series of 61 plasma cytokines, growth factors, and related molecules in a longitudinal cohort of mostly medicated subjects with chronic schizophrenia (SZ, n=49), bipolar depression (BPD, n=20), mania (BPM, n=20) andhealthy controls (CT, n=101). Biological samples and clinical information were leveraged from an earlier well designed trial, allowing us to control for many important confounders, including sex, age, race and tobacco use. Diagnoses were established using the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID) and SZ symptoms were evaluated with the Positive And Negative Syndrome Scale (PANSS). Samples were collected from patients within 6 weeks of an acute exacerbation of their illness (T1) and then redrawn 6 weeks later (T2). Differences in analyte levels between diagnostic groups were analyzed using factorial ANOVAs to control for confounders. Relationships between marker concentrations and clinical variables in the SZ group were assessed by Spearman’s correlations. In addition, with data reduction methods we developed logistic regression models that used T1 analyte levels to predict SZ diagnosis (SZ v CT) and clinical status of SZ patients at T2 (improved v not improved). Compared to other groups, SZ patients had significantly increased plasma concentrations of 7 analytes at T1 (IL12p40, IL13, CCL4, HGF, Resistin, sICAM1, VCAM1) ($p<.05$). Interestingly, analyses within the SZ group revealed associations between higher concentrations of multiple pro-inflammatory markers at T1 (CXCL9, CSF1, PDGFBB, VEGFA, PlGF1, EGF) and a decrease in PANSS scores over the study period ($p<.05$). Consistent with earlier studies, our findings also showed a positive association between change in IL-10 levels and change in PANSS scores across time points. Results from the logistic regression model predicting clinical improvement were particularly notable for a strong contribution from CSF-1 (OR 8.174; p=0.006), an essential regulator of macrophages including microglia. While preliminary, our results are provocative and suggest a complex disturbance of cytokines and growth factors is present in schizophrenia with implications for future studies on disease mechanism and biomarker

No. 163

Genetic Testing in Psychiatric Patients Facilitates Long-Term Psychotherapy

Poster Presenter: Gaurav Vishnoi, M.D.

SUMMARY:

Title: Genetic testing in psychiatric patients facilitates long-term psychotherapy Background:

People often equate high doses of antidepressants with severity of depression but it is more closely correlated with refractoriness to drug treatment. This case report highlights the importance of genetic testing in these patients. The patient is a 60-year-old Irish-American woman who has been undergoing treatment with high doses of multiple medications for her depression with little response, if any. On further evaluation, it is found that she has lifelong history of unrecognized Adult ADHD(she lost several jobs because of inattention to details, poor time management) and is found to be positive for Val/Val COMT gene which is a marker for ADHD and has been proposed to be the cause of impairment of short-term memory in these patients. ADHD symptoms are further impaired by smoking marijuana as in this patient. Psychosocial background includes that patient is Irish-catholic. Being blamed (for example blaming the victim for failure at school) and guilt is a big part of her culture that she has internalized over years. Also, there is a high incidence of alcoholism and depression in Irish population; hence genetic loading was in favor of depression in the current patient. She sought help for her depression over years but did not respond. Unfortunately, her treatment providers blamed her for not taking medications. Augmentation with atypical antipsychotic medications like Olanzapine and Abilify did not work for this patient. Results of her genetic testing: As per her genetic testing report medications which she can take included- MAOIs- She did not want to take MAOIs because of dietary restrictions. Good CBT with a partial response from Meds. She needs and would benefit from good support from psychotherapy. Also, she could be persuaded to try MAOIs later during her CBT sessions. Bupropion- has a ceiling of 450 mg as the patient is a rapid metabolizer., so she achieves sub therapeutic blood levels.

No. 164

Cardio-Metabolic Risk Factors With Different Antipsychotics in Early Psychosis Patients

Poster Presenter: Gaurav Vishnoi, M.D.

SUMMARY:

BACKGROUND: Schizophrenic patients have high cardiovascular mortality. Characterization of risk factors during their first inpatient hospitalization is less clear and may be helpful for early preventive interventions. Objectives of the study were to: 1) Determine the prevalence of cardio-metabolic risk factors and duration of untreated psychosis in First Episode Psychosis (FEP) patients treated in a specialized FEP inpatient unit and 2) Study the relationship of these risk factors with the type of antipsychotic treatment. PRACTICE GAP: Approximately 100,000 adolescents and young adults in the United States experience First Episode Psychosis(FEP) each year. The data related to baseline cardio-metabolic risk factors in early psychosis patients are relatively scarce. The aim of this study is to better characterize the cardio-metabolic health of FEP patients treated in a specialized FEP unit, and their relationship to type of antipsychotic treatment. METHOD: Data for early psychosis patients (with a DSM-5 diagnosis) admitted to a specialized first episode psychosis inpatient unit was collected and analyzed for baseline cardio-metabolic risk factors. All participants had experienced only one episode of psychosis (individuals with a psychotic episode followed by full symptom remission and relapse to another psychotic episode and those with >6 months of lifetime antipsychotic medications were excluded). Mean +/- standard deviation was calculated and data were compared using student's t-test. RESULTS: 80 patients (73 males; 7 females with age 16 to 23 years) were included in the study. Only 4 out of 80 patients had elevated blood pressure at baseline. Mean HBA1C was 5.2±0.47; total cholesterol was 157± 33.6, triglycerides were 79.3±36.9, LDL was 89.4±23.8 and HDL was 40.96± 9.2. The median duration of untreated psychosis was 165 days (range of 1 day to 12 years on first admission). On admission, 15 percent (12/80) were either overweight or obese. Antipsychotics included Haldol, Risperidone, Olanzapine, Ziprasidone, and Aripriprazole. Average weight gain (in kgs) on discharge was 2.6 (65.8±10.1 to 68.4±9.8 ; $p<0.001$) while an increase in BMI was 0.7(22.8±4.7 to 23.5±4.9 ; $p< 0.001$). On Risperdal, patients gained 6.03±4.7,; on Olanzapine average weight gain was 7.15±3.4; on Haldol average weight gain was 4.5±4.2 while on others(Aripiprazole and Ziprasidone), it was 0.37±0.24) kgs CONCLUSIONS: In FEP patients, cardio-metabolic risk factors are present early in the illness and likely related to unhealthy lifestyle and

antipsychotic medications. Early interventions including exercise, dietary restrictions, close medical monitoring and appropriate choice of antipsychotics starting during first hospitalization itself, may be helpful as prevention strategies.

No. 165

Hospitalized Indian-American Inpatients and Their Unique Stressors: A Case Series

Poster Presenter: Jasmine Malika Singh, D.O.

SUMMARY:

Background: Recent immigrants are a psychiatrically underserved population. Various interventions to promote assimilation and mental wellbeing have been identified, including assistance with English, access to mental health services, attaining employment, and promotion of family connections. There are over 2.8 million Indian-born immigrants in the United States (2010 Census), and this population may have specific and unique psychological stressors that have not been addressed in the current literature. In general, Indian-Americans speak English and are mostly employed, factors that promote assimilation that can be absent in other immigrant populations. To explore the psychosocial stressors that Indian-Americans do experience, we performed a small case series review of clinical experiences of adult Indian-American psychiatric inpatients. Methods: A case review was performed on six adult first generation Indian-American patients who were hospitalized on an inpatient psychiatric unit within a 3-month period. These patients had a mean age of 48 with a standard deviation of 14, and their length of stay ranged from 3-18 days. The sample consisted of 3 male and 3 female patients. Their admission diagnoses included severe MDD, without psychotic features, bipolar I disorder in a manic state, various substance use disorders, and schizophrenia. The patients were stabilized on psychotropic medications, including antipsychotic medications. Results: During the hospitalization, insight and function improved in all patients. Patients expressed satisfaction with treatment. Four patients reported family as a negative, chronic stressor. Three patients cited cultural differences between child and parent as a chronic stressor in their lives. These patients' chronic issues with immigration, assimilation, cultural, and family issues appear to have contributed to their major episodes of psychiatric illness. Conclusions/Future Directions: After a preliminary case review, unique psychosocial stressors are emerging for the Indian-American population. Indian-Americans cite family as a negative stressor, as opposed to other immigrant populations who see family as an aid and coping mechanism in immigration and assimilation. Cultural differences between immigrant parent and first-generation American born child were also expressed as a stressor. Also, a lack of awareness of mental health is another issue these patients exhibited. These cases illustrate potentially unique mental health issues faced by this population. Specific interventions may benefit this population to promote wellbeing, such as the innovation of an assimilation tool to promote biculturalism and assimilation into both native and host cultures, mental health awareness by way of education and community outreach programs, as well as cohesion in the family unit especially in the child-parent relationship. Cases will be continued to be collected with a goal to generate an overall sample of 10 cases.

No. 166

Mental Health and Psychosocial Problems Among Victims of Earthquake in Nepal

Poster Presenter: Shree Ram Ghimire, M.D.

SUMMARY:

Background: Despite earthquakes being the most common and devastating natural disasters, relatively little attention has been paid to their mental health consequences. The risk for mental health and psychosocial problems has substantially increased among the earthquake affected population in Nepal. The aim of the study was to reveal psychological distress and to explore the mental health and psychosocial problems in the earthquake affected population of four districts in Nepal immediately after the disaster. Methods: The study population was a total of 518 patients attending an emergency mental health camp conducted during the two weeks after the mega earthquake in 4 different affected districts of Nepal. The patients were first screened by the general medical health camp using exclusion and inclusion criteria. Each patient was

then asked to list the symptoms that they developed as a consequence of earthquake in local language after taking the socio demographic details. The data was then analyzed. No syndromal diagnosis was made for the study. Results: Out of 412 respondents, the majority was females (58.65%) and the most patients were in the age groups of between 25 to 35 years. Among the symptoms, fearfulness, shaking, sleep disturbances, avoidance, and worries were consistently reported in majority of the patients. The other rare symptoms reported were mutism, suicidal ideation, bed wetting, and isolation. Women, children, and elderly were the most severely affected age groups. Conclusion: Mental health and psychosocial problems immediately after humanitarian crises are common but transient. Different positive coping mechanisms, access to social support networks, family and community support, talking with friends, and engaging in work or religious activities help minimize the psychological problems. Lack of such support might result in long term consequences. The Psychological First Aid provided by Disaster Psychiatry Outreach was also able to reduce the initial distress and foster short and long-term adaptive functioning. A need exists for strengthening the psychological first aid system in disaster prone regions, especially in the developing countries like Nepal.

No. 167

Assessment of Community Needs and Association Between Mental Health Problems and Risk Behaviors

Poster Presenter: Leslie Bardessono, D.O.
Co-Authors: Suporn Sukpraprut-Braaten, Andrew J. Powell, M.D., Conrad Braaten

SUMMARY:

Background: The Disease Control and Prevention (CDC) focused on decreasing the following six priority health-risk behaviors including alcohol and other drug use, unemotional injuries and violence, tobacco use, unhealthy dietary behavior, physical inactivity, and sexual behaviors that contribute to unintended teen pregnancy and sexual transmitted infections.1-3 This study focus on assess community needs among underserved population in Arkansas and determining associations between physical and mental health problems on health risk behaviors. Methods: A cross-sectional study was conducted via a community-wide survey among uninsured and underinsured residents of White County and nearby counties in Arkansas. The survey collected demographic information, general health, sleep and exercise, tobacco use, and mental health related questions. Statistical Package R version 3.4.0 was used to compute descriptive statistics, Pearson's correlation, and odds ratio. Results: Total of 96 adults completed the survey (mean age=38±12 year old, 21% are males). 65% of the responders stated that they had no visit to a doctor in the past 3 years or longer. Only 4% of the responders had a routine health checkup. On average, number of days that pain made it hard for them to conduct usual activities, such as self-care, work, or recreation was 10 days; number of days they felt sad, blue, or depressed was 8 days; number of hours of sleep they get within a 24-hour period was 7 hours. 68% of the responders stated that they were dissatisfied with their lives. There was a significant association between the responders who has social and emotional they need and number of cigarettes smoking each day (Pearson's correlation=0.239, p-value=0.0192) and between number of days they feel sad, blue, and depressed and number of cigarettes smoking each day (Pearson's correlation=0.220, p-value=0.0156). Responders who do not participate in any physical actives or exercises such as walking or gardening were 5.4 times more likely to report to have serious difficulty in concentrating, remembering, or making decisions (odds ratio=5.4, 95% CI=2.11 and 13.6, p-value=0.000265). Conclusion: These results revealed the needs of psychiatrists, psychologist or other health care providers for the people with mental health problems in the severely underserved population would benefit on reducing their health risk behaviors such as smoking and lack of physical activity and improving their concentrating, remembering, or making decisions. The results from this study could help to reduce several of the six CDC health risk behaviors focus areas especially in underserved areas.

No. 168

Diagnostic Challenges of a Hearing-Impaired Male Reporting Auditory Hallucinations

Poster Presenter: Uruj Kamal, M.D.

Co-Authors: Steven V. Fischel, M.D., Ph.D., Sara A. Brewer, M.D.

SUMMARY:
Auditory hallucinations are a hallmark of Schizophrenia, paranoid type but understanding the etiology of auditory hallucinations in a patient who is deaf raises more complicated diagnostic considerations. In this case report we discuss a hearing impaired patient who presented to clinic carrying a prior diagnosis of Schizophrenia and who reported auditory hallucinations. Mr. P, a 52 year old Caucasian hearing impaired male in DMH care carrying a longstanding diagnosis of Schizophrenia secondary to auditory hallucinations and alcohol use disorder in full remission, presents to the outpatient clinic for follow up of his Invega Sustenna injection and long term management. The patient had recently been admitted to an inpatient psychiatric unit for physical aggression and sexually inappropriate comments that were made to staff in his outpatient clinic that were interpreted as an immediate threat to himself and others and associated with a psychotic decompensation. During the outpatient clinic intake, Mr. P explained that he was inappropriately sent to the inpatient psychiatric ward because his aggressive signing was interpreted as 'psychotic gesticulations.' He said that instead, he was trying to ask facility staff members why there was a delay in his disability check and was asking how to address issues with his DMH subsidized apartment. Previously, the inpatient psychiatric team had considered the differential diagnosis of Schizophrenia with decompensation, adjustment disorder with severe anxiety or PTSD. Of note, the patient adamantly expressed his dislike for the Schizophrenia diagnosis and found it traumatizing. Interestingly, staff members on the unit felt that when the patient aggressively signed to providers when trying to communicate something about his unwarranted Schizophrenia diagnosis, he instead appeared to be responding to internal stimuli. Additionally, Mr. P himself did note that Risperdal helped him with moments of 'emotional rage.' It was suspected by this clinician that the patient's affective and emotional dysregulation was secondary to an underlying character pathology as well as resentment towards the medical world for not understanding his communication barriers. The patient explained to the outpatient team that his auditory hallucinations are his own way of processing insults from the outside world. In this poster, we will (1) explore the diagnostic challenges involved in working with a deaf patient who reported auditory hallucinations (2) discuss the importance of an emotional vs. psychotic etiology of symptoms in this patient (3) address treatment options for auditory hallucinations in the deaf population.

No. 169

A Critical Review of the Affects of Maternal SSRI Use During Pregnancy on Attention-Deficit/Hyperactivity Disorder and Non-Autistic Learning Disorders

Poster Presenter: Uruj Kamal, M.D.
Co-Authors: Nancy Byatt, D.O., M.B.A., M.S., Valerie C. Sharpe, M.D.

SUMMARY:
Objective: Perinatal depression is common and associated with poor maternal, birth, and child outcomes. It is often treated with selective serotonin reuptake inhibitors (SSRIs), which have been associated with the Neurodevelopmental Disorders including intellectual disabilities, communication disorder, motor disorders, specific learning disorders and attention-deficit/hyperactivity disorder (ADHD). There is a dearth of critical reviews examining the relationship between SSRI use in pregnancy and ADHD and non-autism spectrum illnesses. Our aim is to examine the extent to which SSRI use in pregnancy is associated with non-autistic learning disorders in offspring including ADHD, intellectual disability, motor disorders, communication disorders and learning disorders. Method: We searched PubMed/MEDLINE from Jan 2009 to July 2017 for human studies using the terms SSRI, pregnancy, ADHD, neurodevelopment, intellectual development, motor, communication and learning disorders and reviewed 12 articles (9 studies): 5 cohort studies, 1 prospective population based study, 2 prospective longitudinal studies, and 1 retrospective case control study. Results: The six cohort studies did not demonstrate a statistically significant association between prenatal SSRI exposure and ADHD, or cognitive, motor, language or behavioral outcomes with low hazard ratios while

adjusting for confounders. One study using claims based data found that second trimester exposure to Bupropion during was associated with offspring ADHD (OR= 3.63) although exposure to SSRIs was not associated with offspring ADHD (OR= 0.91). A population based study did not show a change in executive function at 5 years, non-verbal intelligence at age 5, or neuropsychological function at 7 years in 71 offspring prenatally exposed to SSRIs. A retrospective case control study showed comparable mean standard deviations on the mental developmental index score (94 +/- 15 vs. 91 +/- 10) and psychomotor developmental index scores (79 +/- 21 vs. 75 +/- 20) for in utero SSRI exposure infants vs. placebo, respectively. Conclusion: There were no statistically significant associations between maternal SSRI use and ADHD or other neurodevelopmental disorders. Untreated maternal depression can have negative impacts on impulse control in children. It is important to educate parents and providers about potential risks and benefits of taking psychotropic medications in pregnancy with an understanding that risks associated with untreated maternal depression and anxiety could be greater than risks associated with SSRI use during pregnancy.

No. 170

Is Ambivalence in Pregnancy Pathological? The Role of Psychodynamic Interventions in Treating Depression in a Desired Yet Conflicted Pregnancy

Poster Presenter: Anne Clark-Raymond, M.D.
Co-Author: Alison Draut Hermann, M.D.

SUMMARY:

Depression in the perinatal period is a major public health concern, affecting 14-23% of women antepartum, and up to 25% of women postpartum. The 2015 ACOG committee opinion recommends that pregnant women be screened at least once for mood disturbance. However, less than 20% of women eventually diagnosed with postpartum depression had revealed their symptoms to a healthcare provider. Significant shame and guilt may be barriers to women seeking psychiatric attention, and may relate to an ambivalence towards pregnancy. Ambivalence towards becoming a mother has in the past been presumed to be pathological, and is associated with antenatal depression. This ambivalence has often been thought to result from challenges facing women with lower socioeconomic status, poor social support, a history of sexual or physical trauma, unplanned pregnancies, and obstetrical complications and miscarriages – all known risk factors of perinatal depression. However, the literature also suggests that a woman's conflicts regarding motherhood may be uniquely individual, and relate to her own internal expectations of what motherhood will be, regardless of her number of classical risk factors. We present the case of a 34 year-old married woman, gainfully employed with a graduate degree level education, planning a pregnancy with her spouse, yet facing significant ambivalence upon discovering that she was pregnant. Her resulting severe major depressive episode was treated with an SSRI and CBT, and she initially achieved partial remission. Psychodynamic psychotherapy was then begun to target residual depressive symptoms prior to giving birth. We propose that ambivalence toward motherhood is actually normal, but that a precipitous depressive episode triggered by pregnancy such as this one may reveal underlying psychodynamic conflicts related to themes of dependency, autonomy, and control. An inability of the mother to reconcile her conflicts regarding pregnancy can result in pathology including depression and anxiety disorders, as well as obsessional and psychotic pathology, which can have devastating effects on the mother's and baby's health and on attachment and bonding. Shame and guilt over ambivalence may prohibit patients from disclosing it to providers, thus preventing earlier psychotherapeutic intervention. Likewise, mental health professionals may also be hesitant to engage in uncovering work exploring pregnancy ambivalence for fear of destabilizing fragile patients in the peripartum period, therefore missing an opportunity to effectively treat an important cause of depression. Perinatal ambivalence should be sensitively attuned to by clinicians, and patients should be promptly referred for psychotherapy to explore emotional conflicts. Furthermore, it may be imperative to address these conflicts using psychodynamic psychotherapy in order to fully remit the patient's depression and facilitate her transition to motherhood.

No. 171

A Case of Peripartum Depression in the CPEP

Poster Presenter: Bronwyn Huggins, M.D.

SUMMARY:

Ms. B is a 42 year old unmarried female who presented to the psychiatric emergency room at a university hospital who self presented accompanied by a friend, with symptoms of anhedonia, inability to care for self or 9-year old daughter, diffuse numbness, increasingly distracted, guilt and difficulty maintaining sleep, poor appetite for the last five months. Patient was five months pregnant and expressed desire to abort her baby because she believed the unborn child was the cause of her depressive symptoms. Ms. B reported a history of similar depressive episodes during her three other pregnancies, with resolution of symptoms following delivery. During her second pregnancy, sixteen years ago, patient reports that she was admitted for 3 months for her depressive symptoms and underwent 2 ECT, although did not continue due to concerns regarding the use of anesthetics. She says that with her last pregnancy, she developed symptoms during the first trimester, but was unable to 'cope' and refused SSRIs for concerns of the fetus. She recently began a trial of Citalopram 20 mg po daily, 3 weeks ago for her mood disturbance. On assessment, it was learned that patient's psychiatric history is significant for major depressive episodes, all of which occurred exclusively during the peripartum periods of her four pregnancies, with the exception of her first depressive episode in her mid-twenties. She also revealed history of one suicide attempt a few years ago, by pill ingestion, weekly cannabis use, and has a long history of panic attacks, which have increased in frequency during the last five months (1-2x per week). Ms. B reported that her father suffered from depression and denied any past medical history. Ob/GYN was consulted and medically cleared both mother and fetus. She was admitted to the inpatient psychiatric unit for continued observation with concerns for her safety and potential harm to her unborn child. In this poster, I advocate for further investigation into a demographic of women who experience primarily, peripartum depression, with resolution of symptoms following delivery. I would like to raise awareness to this type of mood dysregulation during this period of time, which is in contrast to the majority of investigations that focus on the postpartum period. This may lead to better understanding of the distinctions between the two, and perhaps generate further inquiry in treatment discrepancies as well. It also highlights a need for conducting studies to explore the prevalence, and psychosocial impact of exclusively peripartum depressive disorder.

No. 172

Perinatal Anxiety Disorders in Singapore

Poster Presenter: Cornelia Chee

SUMMARY:

Introduction: Perinatal anxiety disorders are much less well characterized and described in the literature compared to perinatal mood disorders. We studied women whom we screened for perinatal psychological distress at a tertiary hospital in Singapore Method: Women attending obstetric clinics at the National University Hospital of Singapore between 2008 and 2016 were screened for psychological distress using the Edinburgh Postnatal Depression Scale (EPDS) during their pregnancies or at their six week postnatal visit. Women who scored 13 or more on the EPDS were contacted by case managers and assessed using clinical interview. We also used the Global Assessment of Functioning (GAF) to estimate the functioning of these women. Results: Out of 901 women who were interviewed, 107 women had some form of anxiety disorder, 315 women had major depressive disorder, and 479 women were deemed to have no mental illness. Of the women with an anxiety disorder, 19% were diagnosed with Obsessive Compulsive Disorder, 20% were diagnosed as having Panic disorder, 57% were diagnosed as having Anxiety Disorder NOS (as few women could meet the time criteria for GAD), 4% were diagnosed as having Post-traumatic Stress Disorder (PTSD), and 1% with Social Anxiety Disorder. Women diagnosed with Anxiety disorders were significantly older (M= 31.3 , s.d.=4.1) than women diagnosed with MDD (M= 29.9 , s.d.=5.7) or those who had no mental illness (M= 29.3 , SD=5.6); ($F_{2,890} = 5.88$, $p = .003$). Women diagnosed with MDD scored significantly higher on the EPDS (M= 17.5, s.d.=4.2), than women diagnosed with Anxiety related disorders (M= 15.5 ,

s.d.=5.54) and those who had no mental illness (M= 13.2 , s.d.=3.36) ; (F2,825 = 108.98, p < .001). Women diagnosed with Anxiety related disorders had significantly lower Global Assessment of Functioning (GAF) scores (M= 50.1 , s.d.=26.6) than those who had no mental illness (M= 60.9, SD= 31.2) and women diagnosed with MDD (M= 54.4 , SD=21); (F2,898 = 9.72, p < .001). Conclusion: Women with perinatal anxiety disorders constitute a small but significant proportion of women who report perinatal psychological distress on a self-rated instrument such as the EPDS. They also have characteristics which are different from women with MDD, and may possibly have poorer overall level of functioning.

No. 173

Clinical and Ethical Challenges in the Care of the Parturient Patient With Florid Psychosis

Poster Presenter: Danielle Epstein, D.O.
Co-Authors: Jacqueline A. Hobbs, M.D., Kay Roussos-Ross

SUMMARY:

Managing care of patients with major mental disorders requires a careful balance between patient autonomy and the need to protect health-related interests in these vulnerable individuals whose cognition and judgment are often compromised. Nowhere is this more pertinent than in the intrapartum patient, where the well-being of both mother and fetus can be affected. A 36-year-old G10P2435 female at 37w6d presented to the Emergency Department via law enforcement involuntarily with symptoms consistent with acute psychosis and substance intoxication. The patient had a past medical history notable for unspecified bipolar disorder coupled with ongoing substance use disorder. Previous pregnancies had been complicated by substance use and major depressive disorder, without psychotic features, with peripartum onset. She was felt to be in the early stages of labor and was therefore admitted to the High-Risk Obstetrics Team. The patient's behavior was agitated, erratic, and frequently violent with staff secondary to ongoing paranoid ideations. She consistently refused psychiatric and medical interventions, including fetal monitoring. Although active labor was ruled out, several severe-range blood pressures were measured, concerning for the development of preeclampsia. Standard obstetric practice dictated induction of labor, which the patient refused. On interviews, the patient clearly lacked medical decision-making capacity, as she still endorsed prominent delusions, with the belief that providers were plotting with the FBI to control her. To ensure ethical and legal standards were followed in the fast-paced treatment of this urgent case, psychiatric and obstetric teams sought guidance from the hospital legal counsel. Using surrogate decision making, the patient's mother was identified as a suitable proxy to obtain formal consent. Ongoing efforts to form a therapeutic alliance between healthcare staff and the patient slowly succeeded and allowed for increased monitoring of mother and baby. Providers worked with the patient to further gain trust, utilizing assisted decision making and respectful persuasion to restore capacity and were successful in obtaining verbal consent for induction of labor with possible operative delivery. Labor resulted in an unremarkable vaginal delivery. In non-emergent cases such as these where court injunctions are unobtainable, establishing a working relationship with impaired patients is crucial for the health of mother and baby. By identifying gaps in knowledge and deriving shared goals, the treatment team can optimize cooperativity and reverse diminishments in capacity while respecting patient autonomy.

No. 174

Access to Abortion Services: Mental Health Impacts and Outcomes

Poster Presenter: Mandar Jadhav, M.D.

SUMMARY:

Authors: Mandar Jadhav, MD, Andrew Matrick, Salman Majeed, MD Background: Suicidality during pregnancy could reasonably be attributed in part to the limited options women, especially teenage mothers, may have when faced with an unplanned pregnancy. However, research in this area to ascertain some semblance of causality is quite limited. This may be in part due to suicide being excluded traditionally as a cause of 'maternal death' in widely collected mortality statistics, among other ethical, political, social restrictions in collecting reliable data on the subject. Hence why, when

providing care to one such teenage mother on our inpatient unit, we had limited professional guidance available to us. Hypothesis: Limited access to abortion services can lead to increased risk of suicidality & self-harm behavior in teenage mothers. Methods: Brief review of extant literature relevant to the subject at hand. Case report on one patient seen in the inpatient psychiatric care setting in particular. Discussion of widely applicable tenets derived from the literature as illustrated by the case. New or previously under-emphasized elements pertaining to impact of limited access to abortion on women's mental health are also highlighted. Results: Clear and present danger to the mental health & wellbeing of young women is posed by wantonly limiting access to abortion services. However, there is also a known association between increased prevalence of mental illness after obtaining an abortion, which must be considered on a case by case basis. Conclusion: Awareness of mental health impact of this issue must be raised more broadly so clinicians and other supportive services personnel coming in contact with this vulnerable population can act to intervene early and prevent both undue morbidity and mortality.

No. 175

Meta-Analysis of Prenatal Antidepressant Exposure as Risk Factor for Autism: Impact of Comparison Group Definition

Poster Presenter: Monica Lynn Vega, M.D.
Co-Authors: Graham Newport, Durim Bozhdaraj, M.D., Samantha B. Saltz, M.D., Charles Barnet Nemeroff, M.D., Ph.D., D. Jeffrey Newport, M.D.

SUMMARY:
Background: A 2014 position statement by the US Dept. of HHS Agency for Healthcare Research and Quality (AHRQ) posited that studies of prenatal antidepressant (AD) safety are "inadequate to allow well-informed decisions . . . because comparison groups were not exclusively depressed women". Illustrating this concern, existing meta-analyses, concluding prenatal AD exposure is associated with autism, have failed to evaluate the impact of comparison group designation. The current meta-analysis addresses this gap in the literature. Methods: A search of 7 databases was performed with keywords including antidepressant or selective serotonin reuptake inhibitor (SSRI), pregnancy, and autism. Observational studies reporting odds (OR) or hazard (HR) ratios for autism following AD exposure qualified. Analyses of prenatal SSRI or AD exposure were performed. Subgroup analyses stratified by population, psychiatric, and sibling comparison groups, and a final composite analysis were conducted. Statistical analyses were performed using Comprehensive Meta Analysis software. Results: Fourteen studies (8 cohort, 6 case-control) were included. Thirteen studies reported results using a population-based comparison group. Psychiatric and discordant sibling comparison groups were reported by 5 and 4 studies respectively. Population-based analyses uniformly produced significant estimates of autism for exposure to any AD (HR= 1.42 [95% CI: 1.22-1.65]; OR=1.43 [95%CI: 1.21-1.68]) or SSRI (HR= 1.53 [95% CI: 1.37-1.72]; OR=1.55 [95%CI: 1.36-1.75]). Conversely, psychiatric comparison groups demonstrated no significant associations for AD (HR= 1.16 [95% CI: 0.79-1.72]; OR=1.12 [95%CI: 0.84-1.48]) or SSRI (HR= 1.25 [95% CI: 0.79-1.79] OR=0.99 [95%CI: 0.65-1.52]) exposure. Analyses of siblings discordant for autism, arguably enhancing control for both heritability and psychiatric illness risk, suggested SSRI exposure may even afford protective effects (OR=0.79 [95%CI: 0.65-0.97). Other estimates using the sibling comparison group for ADs (HR= 0.95 [95% CI: 0.69-1.31]; OR=0.87 [95%CI: 0.58-1.30]) or SSRIs (HR= 0.82 [95% CI: 0.60-1.12]) were insignificant. A final composite analysis demonstrated no significant effect of exposure to ADs (HR= 0.97 [95% CI: 0.83-1.14]; OR=1.16 [95%CI: 0.88-1.51]) or SSRIs (HR= 0.99 [95% CI: 0.82-1.21]]; OR=1.18 [95%CI: 0.93-1.51]). Results limited to first trimester exposure were similar. Conclusion: Underscoring concerns raised by the AHRQ, study design, particularly alternative means of defining and selecting comparison groups, leads to discordant conclusions regarding the risk for autism conveyed by prenatal AD exposure. Although population-based comparisons suggest that AD exposure increases autism risk, psychiatric and family-based comparisons do not support this conclusion. Future studies evaluating risks of fetal AD exposure should attend to this important research design concern.

No. 176

WITHDRAWN

No. 177

Management of PTSD and Anxiety in a Pregnant Patient With Substance Use Disorders

Poster Presenter: Yon Park

SUMMARY:

Ms. A is a 29-year-old African American female with a history of postpartum depression and tobacco use disorder, who presented to the community outpatient clinic with complaints of difficulty sleeping, depressed mood, and poor appetite in context of recent murder of 15-year-old son. The patient is a single mother with two small children, attends online college, and has a poor familial support system. She smokes 1-2 cigarettes daily but is trying to cut down. She also has a history of sexual molestation by a stepfather when she was a pre-adolescent, and a history of domestic violence by previous partners. Her family history included substance use in both parents, Her episode of postpartum depression was after the birth of her nine-year-old daughter. She experienced tearfulness and sadness and was prescribed Lexapro and attended therapy at another clinic. She was undergoing pre-trial proceedings of her son's murderer and complained of worsening symptoms recently. She discovered she was 12 weeks pregnant and was unsure if she would like to keep the baby. She was educated on the risks and benefits of medication management during pregnancy and started on Prozac for depression and anxiety symptoms, and Benadryl at bedtime as needed for sleep. She was also recommended to come in weekly for supportive therapy through this difficult time. In the next few months, she presented sporadically at the outpatient clinic. She continued to struggle with grief and decided to keep her baby. She was still smoking cigarettes and also revealed that she was diverting a family member's Xanax prescription to self medicate her anxiety. She was also using Prozac on an as needed basis to cope with moments of increased anxiety and panic. Several sessions were spent on psychoeducation of antidepressants, management of anxiety, and the harmful effects of benzodiazapines to the fetus. She was strongly encouraged to come to therapy more regularly. This poster aims to examine the literature on current treatment of anxiety and PTSD symptoms in pregnant women, current recommendations of treatment for pregnant patients with comorbid anxiety and depression, and the challenges of treatment in this specific patient with active tobacco use and a tendency to self medicate.

No. 178

The Correlation Between Symptoms Orthorexia Nervosa and Health Anxiety: Findings From a Survey of Health Professionals

Poster Presenter: Yon Park

Co-Author: Rebecca Sokal

SUMMARY:

Background: In the last decade, the term orthorexia nervosa (ON) has been used to characterize a set of specific disordered eating symptoms, including preoccupation with health and healthy foods and obsession with the quality or purity of food . ON was first introduced in 1996 in an article by Dr. Bratman and since then, several case reports and small population screening studies have been conducted in Europe and the U.S. Prevalence rates vary from 1% in a small US student sample to 70% in a nutrition student sample; however, additional research needs to be conducted to have a more reliable understanding of prevalence. ON is not recognized in the DSM-5. In fact, there is wide debate regarding whether it should be identified as its own eating disorder (ED) entity or whether it should fall under pre-existing diagnoses like anorexia nervosa (AN) or ARFID, or a category outside EDs, such as obsessive compulsive disorder or somatoform disorder. While there have been studies assessing the prevalence of ON, there have been few studies attempting to distinguish characteristics of ON from those of other EDs. Current literature, as well as clinical experience, suggests that health anxiety may play a significant role in the development of ON symptoms. This is in contrast to AN in which behaviors are driven by a desire to be thin or an obsession with body image. With this study, we aim to determine whether or not ON symptoms are positively correlated with health anxiety and whether this establishes a key point of divergence between ON and AN. Methods: We formulated a 15 item survey with questions adapted from the ORTO-15 questionnaire to screen for ON.

This survey, along with the Eating Attitudes Test, and the Whitely Index will be given . to health professionals at the University of Maryland University Hospital and graduate students on the University of Maryland Baltimore campus. Results: We hope to disseminate the survey starting in October 2017 and complete data collection by April 2018. We aim for a sample size of 100 surveys. Conclusions: It is hypothesized that there will be a strong positive correlation between ON and illness anxiety symptoms. Further, it is hypothesized the correlation between ON and illness anxiety symptoms will be significantly stronger than the correlation between AN and illness anxiety symptoms. It is hoped that results from this survey will contribute to the literature conceptualizing ON as a series of symptoms distinct from other ED classifications.

No. 179

Clinical and Sociodemographic Features in Childhood Versus Adolescent-Onset Anorexia Nervosa in an Asian Population

Poster Presenter: Cecilia Kwok
Co-Authors: Victor Kwok, Kelly Ann Zainal, Huei Yen Lee, Shian Ming Tan

SUMMARY:
Background: Onset of anorexia nervosa (AN) is generally in adolescence, however there is a trend of increasing rates in childhood. Childhood-onset AN is often under-recognised and under-treated as it may have an atypical presentation, resulting in an overall worse outcome. This study aims to 1) describe the clinical and socio-demographic features of AN in patients 18 years and below, and 2) compare childhood (onset below 13 years) and adolescent-onset (onset between 13-18 years) AN. Methods: All patients below 18 years of age, diagnosed with anorexia nervosa at Singapore General Hospital between Jan 2003 and Dec 2014, were included. Patients with age of onset below 13 years were categorized as childhood-onset AN while the rest were categorized as adolescent-onset AN. Clinical and socio-demographic information was extracted from casenotes. Results: Overall characteristics: Of the 435 identified patients, 8.3% had onset below 13 years, mean 11.5±1.0 years. The adolescent-onset group had mean age of onset of 15.2±1.6 years. The patients were predominantly female (95.4%) and Chinese (83%). Compared to the general population, a greater proportion of patients stayed in private housing, indicating higher socio-economic background. There was under-representation of Malays and Indians compared to the national ethnic distribution. Comparison between adolescent-onset and childhood-onset groups: The two groups were similar in socio-demographic variables, as well as gender distribution, presenting BMI, amount of weight loss, AN subtype, presence of psychiatric comorbidities and family history. The childhood-onset group had significantly longer duration of illness prior to presentation (4.75 vs 2.62 years), greater frequency of co-morbid OCD (19.4% vs 5.3%), were less likely to report binging symptoms (13.9% vs 26.6%) and were more likely to report teasing as a trigger for AN (58.3% vs 31.6%). The childhood-onset group also had significantly longer duration of inpatient stay (5.97 vs 3.22 weeks), as well as a greater number of total admissions (2.78 vs 1.37). Conclusion: This is one of the few studies looking at anorexia nervosa in children and adolescents in an Asian population. Our results suggest that cultural and socio-economic factors may impact the development or identification of AN in an Asian context. There appears to be a delay in diagnosis of childhood-onset AN, possibly due to an atypical presentation, with a corresponding more unfavorable clinical course.

No. 180

Predictors of Treatment Outcome in Adolescent Outpatients With Anorexia Nervosa

Poster Presenter: Charlotte Jaite

SUMMARY:
Background: This study aimed to determine predictors of treatment outcome in adolescent outpatients with anorexia nervosa (AN). Methods: The sample included 81 adolescent patients (Mage = 16.9, SDage = 1.8) with AN according to DSM-IV. Patients were randomly assigned to either 25 weeks of CBT or 25 weeks of DBT. Before (T0) and after treatment (T1) the Structured Inventory for Anorexic and Bulimic Syndromes (SIAB-EX), the Eating Disorder Inventory-2 (EDI-2) and the Symptom-Checklist-90-R of Derogatis (SCL-90-R) were applied. For each participant body height (m) and body

weight (kg) were measured to calculate the body mass index (BMI) and the BMI percentile. The following baseline variables were examined as possible predictors: age, BMI, duration of illness, subtype of AN, various axis I diagnoses, eating disorder-specific and general psychopathology as well as treatment group (CBT/DBT). Linear regression analyses were conducted to identify the predictors of the BMI and the EDI global score at the end of treatment. Results: A higher BMI (p = .048), a lower age (p = .018), and a lower eating disorder-specific psychopathology (p = .004) were associated with a better outcome at the end of outpatient treatment. The other studied predictors showed no prognostic impact on the treatment outcome. Conclusions: Further research is necessary to investigate whether patients with severe AN might benefit from specific treatment approaches.

No. 181

Comorbid Anorexia Nervosa and Psychosis: Which Came First?

Poster Presenter: Danny Tran, D.O.

SUMMARY:

INTRODUCTION: The incidence of anorexia symptoms is observed in up to 4% of patients diagnosed with schizophrenia (1) while psychosis has been estimated upwards to 13% in patients with eating disorders (2). In cases where symptoms of these two disorders occur simultaneously, it may be difficult to discern if the patient's anorexia is secondary to the psychotic symptoms or whether the patient's malnourished state is the cause of the psychosis. Here we present a case with comorbid anorexia nervosa and psychotic symptoms. CASE: We report a 34 year old African-American female who presented to the intensive care unit on a 7 day petition by her mother for anorexia nervosa, restricting type exhibiting significant muscle wasting, dehydration, and weakness resulting in recurrent syncopal episodes. The patient was emaciated and malnourished, with a height of 5'10 weighing 89 pounds (Body mass index (BMI) of 12.8). She had profound bradycardia (heart rate in the 30's) with hypokalemia. She refused all oral intake. She was started on IV fluids with electrolyte replacement. Psychiatry consulted for anorexia management. According to the patient with collateral from her mother, the patient had been decreasing her food intake for the past 18 months resulting in eating primarily soup and at times a couple bites of her meals each day. She complained of dysphagia, believing she had an obstruction in her throat and esophagus, and complained of chronic sharp abdominal pain. Medical work up was negative for gastrointestinal pathology. She was paranoid of the food presented to her, believing it was unsafe by the people who handled and prepared it. She described "burning sensations" on her skin when presented with food. According to her therapist whom she saw on an emergency basis, the patient had a history of grandiose delusions, believing she was a famous model owning her own fashion line. She has always refused past psychiatric treatment and medications. She was guarded and withdrawn with disorganized and incoherent thought processes. The patient was titrated up on intramuscular olanzapine. Over the following week, her fluids intake improved and she began to slowly eat, at which time we added oral sertraline. Her appetite increased even further and subsequently required management of refeeding syndrome with hypokalemia, hypophosphatemia, and hypomagnesemia. At time of discharge, the patient's electrolytes stabilized, she weighed 115 pounds (BMI of 16.5) and her psychosis was resolved. DISCUSSION This case demonstrates a patient with psychotic symptoms that went untreated for well over a year with prominent delusions resulting in her refusal eat or take medications. The patient responded well to antipsychotics and as her delusions decreased, she ate without difficulty. We illustrate the importance of considering underlying psychosis in patients presenting with eating disorders.

No. 182

Psychogenic Polydipsia in a Female With Anorexia Nervosa: Case Report and Recommendations

Poster Presenter: Jessica Jung-Eun Kim, M.D.
Lead Author: Sofia K. Penev, M.D.
Co-Author: Robert G. Bota, M.D.

SUMMARY:

Psychogenic polydipsia (PPD), characterized by polydipsia and polyuria, has been commonly identified in patients with psychiatric disorders. However, cases describing PPD in patients with

anorexia nervosa are rare. The current literature suggests multifactorial pathogenesis of PPD, involving dysfunctional hypothalamic thirst regulation and subsequent excessive water intake. As anorexia nervosa commonly coexists with depression, anxiety, or OCD, patients may also be taking agents associated with SIADH or anticholinergic side effects like dry mouth, which may further contribute to increased thirst. In addition the pathology of PPD involves compulsive tendencies with the aim of suppressing hunger and controlling appetite. Patients may drink as an attempt to pacify anxiety associated with their body image, eliminate toxins, and maintain a low target weight. Water intake and diuresis may also represent a form of binging and purging, respectively, in a subtype of patients with anorexia. In this case report we support the previously proposed theory that PPD may be a variant of OCD in patients with eating disorders. Our patient in particular expressed emotionally distressing ruminations that were relieved by compulsive drinking behaviors. In this poster we also discuss treatment options for psychiatric conditions concomitant with PPD. While SSRI's have been linked with hyponatremia, mirtazapine seems to be the lowest risk to cause hyponatremia and may be a good option to target associated depression. As patients with anorexia nervosa and OCD display dysfunctional thalamo-frontal circuits and deficiencies in essential fatty acids, fish oil supplementation may also be beneficial in this cohort.

No. 183

A Case of Orthorexia Nervosa With Atypical Features

Poster Presenter: Xiaojing Shi, M.D.
Co-Authors: Douglas Opler, M.D., Chun M. Tong

SUMMARY:

Introduction Orthorexia is defined as a fixation on eating healthy food 1 to avoid ill health. It is not in the DSM-5, but may represent behavioral addiction.2 It has similarities to OCD and eating disorders, with obsessive-compulsive traits: intrusive thoughts about food, health, and contamination. Those with OCD usually recognize obsessions as unreasonable, try to resist them, or perform rituals in response. Orthorexics usually believe symptoms are reasonable.3 They typically have no fear of weight gain. They focus on quality of food instead of quantity and are usually secretive about rules they create for food. It is more common in men, while anorexia and bulimia are more common in women.4 We present a case of orthorexia, which is notable in highlighting a little known illness. Features of the case differ from prior reports. Case Report A 24 year old man with gastritis and no psychiatric history was admitted to medicine for weakness and weight loss. Psychiatry was consulted because he reported a preoccupation with healthy eating for 2 years. He described the motivation to diet as related to worries about health. He endorsed obsessions about protein content, effects of fiber on bowel movement, effects of K+ on cardiac function, and risk of developing diabetes from carbohydrates, despite no problems with glycemic control, bowel, or heart. He lost 30 lbs in 6 months, despite trying to gain weight. BMI was 16.3. He reported anxiety about food so intense that he would wake up to prepare meals for the next day to alleviate anxiety. He would spend great lengths on food preparation. He denied excessive cleaning or preoccupation with order. His mother reported that potatoes, pasta, and ketchup were his primary foods. He found his behavior upsetting, stated that he wished he could change, and "It's killing me." He was referred to follow up with a PCP, psychiatric care, and a dietitian. Discussion: Among eating-related disorders, such as food-related OCD, anorexia, bulimia, and orthorexia, pathological behaviors in anorexia and bulimia are related to how much a patient eats, food-related OCD relates to how the patient eats, and orthorexia involves what the patient eats. Although meeting the definition of an obsessive and pathological fixation on what he ate, so consistent with orthorexia, our patient's presentation differed from the typical reported presentation of orthorexia. While usually ego syntonic, this was not the case in our patient, who had a realization that his behaviors were dangerous. This patient was also forthcoming regarding how he ate, rather than engaging in the typical secretive behaviors previously reported. Conclusion Orthorexia differs from other food-related pathologies, but more data is needed to define diagnostic criteria and the range of presentations, as

well as to determine whether it is a distinct diagnosis or rather a variation on existing diagnoses.

No. 184

Binge Eating and Other Related Eating Psychopathology After Bariatric Surgery

Poster Presenter: Yasmin Nasirzadeh
Co-Authors: Karin Kantarovich, Susan Wnuk, Ph.D., Stephanie Cassin, Ph.D., Raed Hawa, M.D., Sanjeev Sockalingam, M.D.

SUMMARY:
Background: Bariatric surgery results in significant weight loss and decreased burden of comorbidities in individuals with severe obesity. However, a proportion of patients can achieve suboptimal weight loss or weight regain as early as two years after bariatric surgery. Post-operative eating behaviors have been found to contribute to unfavorable weight loss outcomes. We explored the severity of problematic eating behaviors at baseline and yearly up to three years following bariatric surgery. In particular, we investigated the change in severity of binge eating, loss of control eating, emotional eating, and night eating. We also explored the effect of early post-operative eating behaviors on weight loss outcomes. Methods: 844 patients were recruited from the Toronto Bariatric Surgery Centre of Excellence (TBSCE) between 2011 and 2014 as part of the Toronto Bariatric Surgery Psychosocial (Bari-PSCYH) prospective cohort study. Demographic factors, self-report measures of eating pathology (BES, EDE-Q, EES, and NEQ), and weights were collected at baseline and yearly after surgery for three years. Results: There was a significant decrease in eating pathology scores from baseline to the first post-operative year. However, there was a significant increase in binge eating (change in mean score±SD= 0.85±4.71; p=0.002), emotional eating (2.00±13.63; p=0.033), and loss of control eating (1.11±7.01; p<0.001) between the first and second years after surgery and night eating (2.52±8.00; p=0.01) between the second and third years post-surgery. Multiple regression analysis for one year eating measures as predictors of two-year percent total weight loss (%TWL) identified that BES (binge eating scale) score one year after surgery was a significant predictor of two year %TWL (Stn Beta=-0.39, confidence interval (CI) -1.23, -0.16, p=0.012). Conclusion: The severity of maladaptive eating behaviors; specifically binge eating, loss of control eating, emotional eating, and night eating, decreases significantly and remains lower than baseline three years after surgery. However, the severity of these behaviors increases significantly between the first and third post-operative years. Binge eating scale score one year after surgery was the only measure to predict worse weight loss at two years. Our study provides further evidence that maladaptive eating behaviors can continue after bariatric surgery and can be detrimental to weight outcomes. Further prospective studies with sufficient power are required to explore long-term post-operative eating pathology and weight outcomes including weight regain beyond two years. This research may inform appropriate post-operative monitoring and referral to mitigate weight regain.

No. 185

Anosmia, Anorexia, and Anhedonia: A Case Study

Poster Presenter: Alicia E. Phillips, D.O.
Co-Author: Mercedes Driscoll, M.D.

SUMMARY:
There are many factors that contribute to the development of anorexia nervosa (AN), including female gender, genetics, anxiety, depression and perfectionism. Anosmia, while not commonly thought of as a predisposing factor for eating disorders, has been associated with decreased perceived quality of life. Impaired sense of smell and taste have previously been demonstrated in patients with both anorexia and bulimia. Here we present the complicated case of a depressed 45-year-old female with a body mass index (BMI) of 11.7 who has anosmia secondary to a motor vehicle accident (MVA) which also resulted in a subsequent traumatic brain injury (TBI). Prior to the MVA in her early 20s she did not have mood symptoms or disordered eating behaviors. She was evaluated by the psychiatric consult service while hospitalized on the medical service for severe hypokalemia (K <3.0) secondary to restrictive eating behaviors . Recently , the patient had become increasingly selective about her food choices, often eating the same type of food, such as a hamburger, for every meal for a prolonged period of time. During her hospitalization, the patient expressed ambivalence about the severity of

her medical conditions. She did however express significant frustration about her anosmia citing it as a reason as to why she has difficulty experiencing pleasure while eating and in other areas of life. In addition to anorexia, the patient also suffered from depression (most recent PHQ-9 score was 24/27). She had recently re-engaged with outpatient behavioral health prior to her current admission, however continued to adamantly deny that she also has an eating disorder. Although there were likely many factors contributing to this patient's anorexia and depression, we propose that her anosmia was a significant contributor to both her depression and her anorexia. Treatment should take into consideration addressing how loss of smell contributes to her perceived lower quality of life.

No. 186

Prevalence of Substance Use Comorbidity in Individuals With Eating Disorders: A Systematic Review

Poster Presenter: Anees Bahji, M.D.
Co-Author: Mir N. Mazhar, M.D.

SUMMARY:
Objective: The comorbidity of substance use disorders (SUDs) and eating disorders (EDs) has frequently been reported over the past four decades, however, there has been no recent synthesis of the literature. The objective of this study was to systematically review the literature on the prevalence of comorbid SUD in individuals with ED, and to report rates of lifetime prevalence. Method: A search of 6 databases (EMBASE, CINHAL, Medline, PubMed, Cochrane, and PsycINFO) was conducted targeting articles on the epidemiology of comorbid SUDs in individuals with EDs, in particular, reported rates of prevalence. The review was performed in accordance with PRISMA guidelines and was limited to studies using standardized or validated criteria to assign ED and SUD diagnoses, published between 1980 and 2017. Results: A total of 43 studies fulfilled inclusion criteria and were included in the study. This review indicates that the prevalence of SUD is higher in individuals with bulimia nervosa (BN) than in anorexia nervosa (AN), and highest amongst those with both disorders (ANBN). Discussion: A limitation to the study was that none of the included studies investigated the new DSM-5 feeding and eating disorders, which warrants attention in future studies investigating the epidemiology of feeding and eating disorders. Several mechanisms explaining the eating disorder-substance use/abuse link are considered, and suggestions for future research are made.

No. 187

Efficacy and Speed of Response of ECT for Unipolar Versus. Bipolar Depression: Systematic Review and Meta-Analysis

Poster Presenter: Anees Bahji, M.D.

SUMMARY:
Objective: Pharmacological efficacy for bipolar major depression (BP) differs from unipolar major depression (UP). In BP, response to treatment with antidepressants is controversial. Whether response to electroconvulsive therapy (ECT) differs between UP and BP remains unclear; in any case, ECT remains a relatively underused treatment modality. Therefore, this systematic review investigates the relative efficacy of ECT in both types of depression. Methods: Relevant cohort studies were identified from a systematic search of the PubMed, Medline, PsycINFO, EMBASE, CINAHL, and Cochrane electronic databases and applying the Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA) guidelines. Ultimately, seventeen studies were included in this meta-analysis. Results: The overall response rate for depression was 59.6% (n = 1193/2001) and the overall remission rate was 44.2% (n = 570/1290). In UP, the response and remission rates were 58.9% (n = 889/1510) and 41.0% (n = 374/913), respectively. In BP, the response and remission rates were 61.9% (n = 304/491) and 52.0% (n = 196/377), respectively. Pooled odds ratios (OR) and 95% confidence intervals (CI) were calculated using random-effects meta-analysis. Similar rates of response to ECT were found in patients with unipolar and bipolar depression (OR = 0.93, CI: 0.73-1.2, p = 0.54), whereas remission rates with ECT were significantly higher in patients with bipolar vs. unipolar depression (OR = 0.73, CI: 0.56-0.96, p = 0.027). Conclusion: Response rates to ECT appear to be equally effective for both UP and BP. However, remission rates are higher in BP, which may be helpful in informing future clinical decision making for patients with refractory mood disorders.

No. 188

Choosing Wisely: An Audit of Urine Drug Screen and Blood Alcohol Testing in Emergency Psychiatry Patients

Poster Presenter: Anees Bahji, M.D.

SUMMARY:

Background: Exposure to illicit drugs and alcohol is a major cause for visits to the emergency department (ED). Urine drug screens (UDS) and blood alcohol levels (BAL) are frequently ordered, however, the utility of these tests in diagnosis and management remain unclear. Methods: ED patients with a mental health or addictions (MHA) chief complaint were retrospectively reviewed over a 3-month period. UDS and BAL ordering and results, patient demographics, medical and psychiatric history, presenting diagnosis, treatment plan, and disposition were extracted and analyzed. Results: our sample included a total of 323 patients. 60 received BAL and 92 received UDS. The main indications for these tests were "history of substance use" and "rule out substance-induced psychosis". BAL and UDS testing did not impact the management of all but two (1%) patients. 35% of patients who received these tests did not receive addictions-specific treatment. Conclusion: roughly one third of the sample received UDS or BAL testing, and for the majority of tests, the documented rationale was inappropriate. Our results suggest that these tests have limited utility in this setting. Increased education on the ordering of these tests could reduce unnecessary testing.

No. 189

Successful Mitigation of PTSD and Fibromyalgia Symptoms With rTMS: A Safer Alternative?

Poster Presenter: Andrew Buchholz
Co-Authors: Tim Heilmann, Sandeep Saran

SUMMARY:

Background: Repetitive Transcranial Magnetic Stimulation (rTMS), initially developed as a research and diagnostic tool, received FDA approval for the treatment of depression in 2008. There have also been promising results for the treatment of chronic pain conditions. Here, we present a case of a military member with severe depression and chronic pain treated with rTMS as pharmacologic options were limited by coexisting polypharmacy. Clinical Case: The patient is a 59 year old Caucasian male was referred to an outpatient psychiatry service at an academic medical center for depressive, posttraumatic, and pain symptoms stemming from his recently diagnosed fibromyalgia. Baseline objective symptom scores included Brief Pain Inventory (BPI) impact score of 7.6, Fibromyalgia Impact Questionnaire Revised (FIQR) composite of 59.3 (overall impact score of 9), PHQ-9 of 16, and Zung Depression Scale of 55. Considering the failed treatments with two SSRIs, three SNRIs, and one TCA, the decision was made to try rTMS. His Depression, PTSD, and pain scores were tracked. Treatment: No changes in medications or psychotherapy occurred. 30 sessions of rTMS using the NeuroStar TMS Therapy® system using standardized left dorsolateral prefrontal cortex depression protocol were given over 8 weeks. Patient's depression rating scale scores demonstrated a trend towards remission of MDD, with PHQ-9 scores dropping as low as 12 at the end of week 7, but rising back to 16 at the conclusion of the final treatment. The patient's Zung Depression Scale scores fell below MDD threshold at 48 (MDD ? 50). The patient's PTSD rating scale, the PCL-5, fell below the threshold of ? 38. With regard to his pain scales, his BPI impact score fell to 6.8. His FIQR impact scale fell from 14 to 9 and his FIQR composite score fell from 59.3 (severe fibromyalgia) to 40.6 (mild fibromyalgia). Conclusion: To our knowledge, this is the first report in the United States Military of the potential for rTMS to treat chronic pain. rTMS creates a magnetic field to generate action potentials at a point in the left dorsolateral prefrontal cortex noted to be hypoactive in depression. Research suggests that rTMS has an efficacy on par with SSRIs – but with fewer side effects and drug interactions. Although the mechanism of treatment with rTMS for chronic pain conditions is not yet known, it has been posited that rTMS may stimulate endogenous opioid release. Other researchers theorize that it is the treatment of depression that leads to pain relief and reduction in functional impact. Studies in the European literature have noted pain relief in patients independent of depressive symptom control – similar to our patient. The use of rTMS in medicine has the potential to

safely and affordably treat chronic pain in military members while reducing the use of opiate and non-opiate analgesics – which carry risk of dependence, morbidity, and mortality.

No. 190

Dead Man Walking: A Case of Coexisting Cotard and Capgras Syndromes Successfully Treated by ECT

Poster Presenter: Ashhar Bhurgri, M.D.
Co-Authors: Ahsan Syed Khalid, M.D., Raymond Faber, Usman Ghumman

SUMMARY:

The Capgras delusion is a delusional misidentification syndrome characterized by the belief that an imposter has been substituted for someone close to the believer. The Cotard delusion is a rarer condition wherein a person believes that they or their internal organs are dead or rotting. Both have been associated with various psychiatric and neurological conditions. ECT has been used to successfully treat these disorders individually. We present what may be the first case report of coexisting Capgras and Cotard syndromes which resolved with a course of ECT. Our patient, 72-year-old female with a history of bipolar disorder, was hospitalized for the third time in less than one month for worsening depression. She had nihilistic delusions of being dead (Cotard's syndrome) when she first presented. After one week her daughter reported that the patient had told her that she was not her real daughter but an imposter (Capgras syndrome). The patient added that this imposter looked, sounded and had the same jewelry as her daughter. She was emphatic in insisting this was an imposter. After an olanzapine trial failed, a course of bilateral ECT was initiated.Both Cotard's and Capgras syndromes as well as mood symptoms resolved within 2 weeks of ECT treatments. To our knowledge, this is the first reported case of successful ECT for combined Cotard's and Capgras syndromes. We consider both Cotard and Capgras as severe delusional illnesses and therefore recommend that ECT should be considered as the first-line treatment for them over antipsychotics, if clinically possible.

No. 191

Every Second Counts: A Retrospective Case Series on Patients Who Underwent Electroconvulsive Therapy in Medical City Philippines September 2015–2016

Poster Presenter: Joyce Ann N. Maglaque, M.D.

SUMMARY:

ECT remains to be a mainstay in the arsenal of treatments for psychiatrists, especially for patients who are deemed treatment resistant. However much is yet to be known regarding the practice of ECT and if there are nuances dependent on certain patient factors, such as age, gender, maintenance medications, psychiatric diagnosis, history of psychopathology and ECT lead placement. To determine these, this study employed a retrospective case series, which utilized chart reviews of patients given ECT at The Medical City from September 1, 2015 to August 31, 2016. After extensive inclusion and exclusion criteria were employed, seven out of the 13 patients given ECT that year were included for this study (n=7). This was comprised of: three (n=3) with MDD, two (n=2) with Bipolar Disorder MRE Depressed, two (n=2) with schizophrenia spectrum disorders. For these cases, they were all initially recommended to undergo 6 ECT sessions. All underwent the same anesthetic technique, performed by the same anesthesiologist. Comparison of their course during treatment was obtained through chart review and through recorded DSM-5 symptom checker accomplished on their admission, after 4th ECT session, after the last ECT session and 24 hours before discharge. Results describe that only cases with MDD who were in their early adulthood (n=2) showed reduction of symptoms 24 hours after the 4th ECT session and did not require further sessions or any changes in the placement of the ECT leads. In contrast, two (n=2) of the cases who were women in their late adulthood required a shift from an initial unilateral ECT to bilateral ECT after no improvement was noted in their 4th session, thereby requiring more sessions than planned. Cases with other diagnoses (n=4) also required more sessions than initially planned and did not show improvement in their symptom checkers 24 hours after the 4th ECT session. Further comparisons in the course of symptoms, as well as the history of each case and overview of their hospital stay, are detailed in the results of this study. Findings and how each case compares with current

literature on the understanding of ECT and factors such as age, gender, diagnosis, history of psychopathology, lead placement, were further explored in the discussion. Because there is little research on the practice of ECT in the country, it is recommended for future researchers to compare symptomatology of patients and their clinical course during the duration of ECT treatment for a longer period of time and with a larger sample size.

No. 192

Electroconvulsive Therapy in a Patient With a History of Significant Mandibular Trauma Secondary to Self-Inflicted Gunshot Wound

Poster Presenter: Maria E. Aguilar, M.D.
Co-Authors: Enoch Barrios, M.D., Robert J. DiFilippo, D.O., Shruti Mutalik

SUMMARY:
Ms. L., a 56-year-old Caucasian female with a past psychiatric history of Post-Traumatic Stress Disorder, and Depression with multiple prior suicide attempts, most recent 1 year ago via gunshot wound to mandible, presents to the psychiatric consult service as transfer from outside facility for trial of Electroconvulsive Therapy in setting of depression with catatonic features. Patient initially presented to outside facility two months prior to transfer with complaints of dizziness, hypotension, headache and diarrhea. During hospitalization, depressive symptoms progressed to severe catatonia retarded type, resistant to benzodiazepine treatment. Bush-Francis rating scale scores ranged from 13 to 25. Symptoms initially improved with low-dose Ativan. Given severity of symptoms, to include patient endorsing suicidality, she was transferred to facility with ECT capabilities. Upon presentation to consult service, catatonia had improved and she was ambulating on own. Physical exam was significant for facial asymmetry and micrognathia due to underlying bone destruction. Mandibular radiographs revealed traumatic destruction of the left mandibular body and right maxillary dental prostheses were noted. Initial PHQ9 prior to ECT was 26 [Extremely Difficult]. After two treatments, patient's PHQ9 was 7 [Somewhat Difficult] and she was denying suicidality. In preparation for patient, there were limited studies regarding placement of ECT leads in patients with facial trauma, specifically trauma from self-inflicted gunshot wounds. As a result of the trauma, the right mandibular bone was completely destroyed, warranting prosthetics. Unfortunately, her prosthesis became infected, resulting in additional scarring and failure of the prosthesis. ECT leads were place in modified bilateral position to ensure rapid improvement in depression and suicidality, and also to decrease the amount of stimulus provided to the right temporalis and right masseters. Left lead was placed over the left temple and right lead was placed medial to the right temple. We discuss the importance of providing ECT to those with atypical anatomy and alternative lead placement in this population.

No. 193

Baclofen Withdrawal-Induced Psychosis: A Case Report and Review

Poster Presenter: France M. Leandre, M.D.
Co-Author: Almari Ginory, D.O.

SUMMARY:
Patient is a 47 year old Caucasian male with a psychiatric history of anxiety who presented to the emergency department with complaints of spontaneous twitching. It was later discovered that there were 116 tablets of Lyrica 100mg, 100 tablets of baclofen 10mg and 11 tablets of Omeprazole 20mg missing. The patient was intubated for 1 day and subsequently extubated. On day 3 of his admission, he became paranoid and started refusing medications. On day 4 he developed visual and auditory hallucinations, thoughts blocking, and worsening paranoia. He had a CT of the head which was negative and his labs were within normal limits. As no medical cause for his symptoms were found, he was admitted to the inpatient psychiatric unit and restarted on Baclofen as well as escitalopram, trazodone, and hydroxyzine. His symptoms resolved once baclofen was restarted and he was discharged home after 5 days. Baclofen is primarily used for muscle spasms. It's mechanism of action include activation of the GABAb receptors and sudden discontinuation can lead to hallucinations, altered mental status, and seizures. Others symptoms of withdrawal from baclofen include hypertonia, hyperthermia, tachycardia, and restlessness. Patient should be tapered off of this medications slowly especially after long-term use. For patients, it is

important to monitor for withdrawal from medications. In this patient's case, his symptoms were attributed to a primary psychiatric illness as the team had not associated his refusal to take medications with withdrawal symptoms.

No. 194

Improving Cardiometabolic Monitoring for Patients on Antipsychotic Medications: Implementing a Cardiometabolic Order Set in the Outpatient Setting

Poster Presenter: Frozan Walyzada, M.D.
Co-Authors: Pankaj Manocha, M.D., Charles Rodolphe Odom, M.D., Raminder Pal Singh Cheema, M.D., Ashaki Martin, M.D., Monika Gashi, M.D., Sasidhar Gunturu, M.D., Wen Gu, Ketki Sharadkumar Shah, M.D., Panagiota Korenis, M.D.

SUMMARY:
The American Psychiatric Association (APA) has implemented guidelines on how patients that are on antipsychotics should be monitored as research has shown us that people that suffer from serious and persistent mental illness die 25 years earlier than the general population. While weight and Body Mass Index (BMI) are important data points to collect, other metabolic factors should also be considered such as Hemoglobin A1C, a lipid panel, and fasting glucose. In order to measure how well we were doing in our outpatient department, we looked at 2826 outpatient records to see if how much of this data was collected. What we found was Hemoglobin A1C was screened 30% of the time, fasting glucose 52% of the time and a lipid panel was screened 38% of the time. When thinking about ways that we could improve the data collection, aside from provider education, we had to find a way to simplify the process. The answer? Creating an order set. This way one step would have all the relevant components thus ensuring that a test is not forgotten and not adding additional time that it would take to place all the orders individually. To see how much we improved, we will be looking at the outpatient department again for the year 2017 and comparing those values. What we anticipate is that there will be an improvement based on what we saw from a small snapshot from January to April 2017.

No. 195

Psychological Distress Affect Almost All Items of the WHOQOL-BREF and Mediate the Effects of Stigma Among Opioid-Dependent Individuals

Poster Presenter: Kun-Chia Chang

SUMMARY:
Background: Both stigma and psychological distress are associated with the overall quality of life (QOL). The objectives of this study are to explore how these two factors affect the different domains and facets of QOL, and the possible mediation effect between psychological distress and self-stigma among opioid dependent individuals. Methods: We interviewed 268 treatment-seeking opioid dependent individuals using the brief version of the World Health Organization Quality of Life instrument (WHOQOL-BREF), the Self-Stigma Scale-Short (SSS-S), the Chinese Health Questionnaire-12 (CHQ-12) and the Opiate Treatment Index (OTI). We constructed multiple linear regression models to determine if the SSS-S and CHQ-12 predict the WHOQOL-BREF scores and tested the potential mediation effects of psychological distress (as assessed by the CHQ-12) between SSS-S and WHOQOL-BREF. Results: The CHQ-12 score was predictive to the scores of the four domains and almost all facets of the WHOQOL-BREF except the item of "Dependence on Medical aids". The significant predictive effects of the SSS-S score on 14 of the 26 facets of the WHOQOL-BREF were reduced to 5, with three in the social domain, after the adjustment of the CHQ-12 score. Psychological distress completely mediated the relation between Self-stigma and physical, psychological, environmental domains, and partially mediated the relationship between self-stigma and social QOL domains. Self-stigma was still significantly associated with social QOL. Conclusions: Psychological distress has a large impact on QOL among treated opioid users. Furthermore, it appears to be a core element in reducing the negative effects of self-stigma on aspects of QOL.

No. 196

Patient Elopement: A Deeper Look at the Aftermath

Poster Presenter: Gina Schlueter
Co-Author: Rana Elmaghraby, M.D.

SUMMARY:
Elopements from secured inpatient behavioral

health units are a rising and dire concern in the medical community. These events can be detrimental to a patient's care, traumatic to staff, and costly to administration. Not only can they lead to distrust from the patient's family, but also disrupt any provider-patient relationship. In fact, elopements are such significant events that "lack of supervision of cognitively impaired individuals with known elopement risk" is considered a trigger for Immediate Jeopardy investigation based on guidelines from the Centers for Medicare and Medicaid Services (CMS).1The repercussions of elopements from inpatient behavioral health units vary between facilities, staff, and most importantly patients. These events are individualized and consequently have a wide variety of effects on the patient and those around them. This poster presents a case of a patient experiencing symptoms of what will most likely be a lifelong psychiatric illness, who was being treated on a secure inpatient unit. In an ideal world, the treatment would have consisted of care coordination, family and patient education, and a plan for consistent follow up. Yet, none of these things can be completed if the patient unexpectedly leaves the unit. This case is a notable example of the effects elopement can have on a patient, their family, the treatment team, and the community. Beyond the effects for this one patient, elopements as a whole are serious adverse events. This poster highlights the significance of preventing elopements and explores mechanisms to achieve that, which is an area in need of improvement.

No. 197
WITHDRAWN

No. 198
First-Episode Psychosis With History of Chronic Cannabis Use Successfully Treated Using ECT Where Other Antipsychotic Treatments Were Refractory
Poster Presenter: Tyler A. Curry, D.O.
Co-Authors: Ashish Sharma, M.D., Matthew K. Egbert, M.D.

SUMMARY:
Ms. A, a 21-year-old Caucasian female with no significant past psychiatric history presented to the emergency department with new onset psychosis. Her symptoms included delusions of pseudocyesis, auditory command hallucinations, and paranoia. She was transferred to inpatient psychiatric unit for further care. She was a college student living in a dorm. Her family reported a history of chronic and heavy cannabis use. Her significant pre-morbid cannabis use obscured the natural history of the disease processes, so several differential diagnoses were kept in mind including first onset psychosis, substance -induced psychosis, schizophrenia and schizoaffective disorder. During her hospitalization, several treatment modalities were tried including anti-depressants and several different antipsychotic medications with no response. Due to the treatment refractoriness of her psychosis, ECT was considered. She demonstrated significant improvement in her symptoms with ECT. After undergoing ten ECT treatments, the patient made remarkable progress and as per her parents, she was 95% back to her baseline level of functioning. We propose the hypothesis that ECT is a viable and effective option when confronted with a case of treatment-refractory psychosis with history of chronic cannabis use.

No. 199
Psy-Q.Com: A Pilot Online, Collaborative Question Bank for Psychiatry Education
Poster Presenter: Zachary Grunau
Co-Authors: John Torous, M.D., Robyn P. Thom, M.D., Fremonta L. Meyer, M.D., Robert Joseph Boland, M.D.

SUMMARY:
Background: Medical students are increasingly preferring online and electronic educational resources, and in many cases prefer these sources to physical textbooks. (1) High-quality question banks are a frequently used resource. Students use question bank apps often during third year, but use apps less frequently during their psychiatry clerkship, possibly due to an absence of highly-rated psychiatric educational apps. (2) Studying through using question banks is not just student preference; use of high quality question banks have been shown to be associated with higher standardized board exam scores. (3). Additionally, collaborative question bank creation has been shown to be an effective method for medical education. (4) Therefore, we have created a free online and collaborative question bank specifically for psychiatry education.

We have initially populated it with 100 faculty-reviewed question and answers. However, as students use the site, they will be able to submit their own questions and answers, which will then be reviewed by faculty and added to the bank. We will pilot the site through a study in one medical school. Our study will passively observe student use of the site, while also utilizing a brief end-of-experience survey. This project will add to the very limited data concerning medical student perceptions and preferences concerning electronic resources specific to the psychiatry clerkship and aid course directors and medical educators in understanding student perceptions of the current state of clinical psychiatry supplemental educational tools. Additionally, we hope to create a portal through which students, residents, and fellows can collaborate and learn. Methods: This is a simple observational study. Students will be offered access to an educational website and we will observe website usage through passive data collection. We will also learn about usage through an optional exit survey. Results: Pending completion of 6 month study period. Conclusions: Pending completion of 6 month study period and data analysis.

No. 200

Quetiapine-Induced Bruxism and Its Management

Poster Presenter: Nigila Ravichandran, M.B.B.S., M.Med.
Co-Author: Han Yang Khiew, M.B., M.B.B.S., B.A.

SUMMARY:

Objective: To present a rare case of Quetiapine-induced bruxism in a patient with Organic Brain Syndrome and Mood Disorder following a road-traffic accident Methods: Case report and review of literature Summary and Results: A 56-year-old man was admitted for relapse of Depression and anxiety with passive suicidal thoughts. He had suffered bilateral sub-arachnoid haemorrhages, cervical spinal fractures and left rib fractures following a road-traffic accident in May 2016. This admission lasted 1 month and 24 days, where several medications and anti-psychotics were used to stabilise his mood. He initially received a combination of Fluvoxamine, Risperidone and Sodium Valproate to stabilise his mood. Due to minimal improvement, Risperidone was cross-tapered with Haloperidol. However, he developed tremors (hands, arms and body) and progressive worsening of oral tardive dyskinesia despite being on anti-cholinergics and decision was made to switch to an atypical antipsychotic. During this time, no evidence of bruxism was observed. He was started on Quetiapine 50mg BD, but after nine days, he developed bruxism, both teeth grinding and clenching of the jaw. The teeth grinding was present only during the daytime, and increased gradually in intensity for the next few days despite discontinuation of Quetiapine, until he had difficulty falling asleep. He had no known prior conditions or dysfunctions of the tempero-mandibular joint, or other dental conditions. He was started on 1 tablet of Anarex (Paracetamol 450mg, Orphenadrine Citrate 35mg) for its muscle relaxant effects and after 5 days, there was slight improvement in his bruxism. Anarex was increased to 4 tablets per day with Clonazepam (0.5mg), which further improved his bruxism. Eventually the bruxism was not noticeable by the patient and others around him. Currently, the treatment for bruxism (from any cause) is aimed at alleviating muscle discomfort, prevention of dental wear and reduction of teeth grinding sounds. Reduction of dose or change of medications may resolve the problem. However in this case, the bruxism persisted despite discontinuation of the agent. Conclusion: Currently, there is no universal treatment (at least pharmacologically) for bruxism. There are only a few case reports in literature which have demonstrated a reduction in or complete cessation of bruxism arising from psychotropic agents. Use of agents like propranolol, clozapine and gabapentin has been reported. Non-pharmacological interventions such as use of a mouth-guard to prevent dental wear have also been implemented.

No. 201

Using Simulation to Achieve Integrated Care (IC) Competency in Medical School: The Getting to Know Patients' System of Care (GPS-Care) Experience

Poster Presenter: Rida Hashmi
Co-Authors: Sanjeev Sockalingam, M.D., Zarah Chaudhary, Maria Mylopoulos, Andrew Lee

SUMMARY:

Background: With emerging evidence and adoption of the integrated care model (ICM), there has been a call to introduce IC and medical psychiatry(MP) training earlier in undergraduate medical education(UME). Currently, few education modules on IC have been fully described and evaluated within preclinical(PC) years. The American Psychiatric Association Council on Medical Education and Lifelong Learning advocates for development of simulation experiences that emphasize MP co-morbidity, beginning in PC training. Purpose: We describe analysis of integration of an MP competency framework into a novel simulation experience for first-year medical students; GPS-Care, to learn about foundational competencies of IC for patients with co-occurring physical and mental illness. Methods: The GPS development team, consisting of educators, family physicians, psychiatrists, and geriatricians, created 5 unique case simulations. Each contained 5 health care provider (HCP) stations that reflected a unique patient care experience within this simulated health care system. Students were divided into groups of 3, 1 role-playing the patient and 2 playing care givers. In groups of 3, a total of 204 students navigated through 5 simulated visits with different HCPs. Students were provided with a longitudinal patient narrative describing the progression and impact of physical and mental illness on the patient and the care givers. An MP reviewer assessed how many of 9 MP competencies were likely achieved within each station of all five streams. Results: Overall the GPS care experiences addressed 7 of 9 competencies from our previously developed UME IC competency framework. The competencies mapped the most were: 'Integrates content knowledge of medical and psychiatric illnesses to patients with co-occurring mental and physical health conditions' and 'Advocates for the complex health needs of patients'. The competencies least likely to be achieved were: 'Identifies ambiguity and seeks help in managing complex patient health needs within inter-professional teams 'and 'Recognizes their own bias and the biases of those in their system of care towards psychiatric patients (supervisor or collaborating healthcare professionals) and identify strategies to manage these biases'. Discussion: We demonstrate a process by which we operationalized a competency framework for IC in UME at the program level. GPS care provided students with an opportunity to approach real-world situations where care issues emerge for patients with both physical and mental illness. Students could achieve several UME IC competencies through GPS Care through a scalable simulation experience for all students. Through mapping of competencies, additional IC curricula can be developed to address the remaining IC competencies not achieved through GPS Care. Conclusion: The following study provides a framework for integrating the ICM early in medical school training informing future curriculum development.

No. 202

Psychiatric Manifestations of Lead Poisoning

Poster Presenter: Sabahat Khan, M.D.
Co-Authors: Rajesh R. Tampi, M.D., M.S., Silpa Balachandran, M.D.

SUMMARY:

Introduction: A 35-year-old African-American male presented to the clinic for evaluation of depression and anxiety. Patient stated that he had been experiencing difficulties with concentration and memory. He also complained of sleeping difficulties, depressed mood, and recurrent anxiety attacks. Upon further investigation, it was discovered that the patient had a history of high blood pressure, headaches that had been diagnosed as tension headaches, gastric pain, and microcytic anemia. Patients history also indicated 2 previous suicide attempts in his early 20's. During the encounter, the patient had some difficulty understanding the standardized depression scale and GDS-7 questioners and needed simplification of the questions. Patient also had some difficulties articulating responses at an adult level. Considering his presentation of mood disorder and his past medical history, as well as, a possible learning disability, we considered lead poisoning as a likely underlying cause. Blood lead levels (BLL) were ordered which revealed a BLL of 19 µg/dL. Objective: In this poster, we discuss the psychiatric manifestations of lead poisoning and the importance of early detection and treatment. Method and Results: We conducted a literature review assessing the psychiatric manifestations of lead poisoning. It was revealed that lead exposure can result in

anxiety, depression, phobias, along with declines in intelligence, memory, and comprehension. Early exposure to lead has also been linked to development of antisocial behavior. Timely chelation treatment and removal of exposure has shown to prevent or reverse the effects of lead toxicity. Conclusion: Acute and chronic exposure to lead can lead to significant psychiatric manifestations depending on the level of exposure. Early detection and treatment may aid in the reversal of post-toxicity sequalae in children and adults. For our adult patient, he likely had childhood exposure to lead that went untreated and he continues to have exposure as an adult. It is recommended the patient remove the source of lead exposure and continue medical and supportive treatment for his depression and anxiety.

No. 203

Cause of Neuropsychiatric Manifestations in Systemic Lupus Erythematosus

Poster Presenter: Sabahat Khan, M.D.
Co-Authors: Rajesh R. Tampi, M.D., M.S., Poorvanshi Alag, M.D.

SUMMARY:

Introduction: Systemic Lupus Erythematosus (SLE) is a chronic autoimmune inflammatory disease process which affects multiple organ systems and can differ in presentation from patient to patient. Neurological manifestations are one of the common occurrence in SLE and can be seen in 25 to 75% of the patients but they can be difficult to diagnose due to their varied presentation. Patients can present with depression, anxiety, psychosis, cognitive defects, or dementia. Objective: In this poster, we aim to explore the possible causes of neuropsychiatric involvement in SLE in order to better understand the mechanism of the disease process. Methods and Results: We conducted a systematic review, which revealed studies have demonstrated that vascular abnormality, inflammation, and autoantibodies play a significant role in development of neuropsychiatric symptoms of SLE. Analysis of data on serum and CSF antibodies in patients with neuropsychiatric SLE (NPSLE) has revealed that these patients had elevated levels of lupus anticoagulant (LA), anticardiolipin (aCL), antiribosomal P antibodies, antiphospholipids (APL), and antineuronal antibodies compared to patients that did not present with neuropsychiatric symptoms in the presence of SLE. Some prospective studies have proposed secondary factors to be the cause, these factors include: infections due to immunosuppressive therapy, hypertension, complications of other organ system failure, and effects of SLE treatment with corticosteroids. Conclusion: The exact cause of NPSLE is unknown but there is a strong emphasis on the connection between increased levels of various antibodies and the development of neuropsychiatric symptoms. Secondary causes must also be taken into consideration and treated accordingly. Since NPSLE is a diagnosis of exclusion, lab and imaging studies need to be conducted to rule out other causes. Treatment will vary depending on the presentation and the cause of neuropsychiatric symptoms.

No. 204

Feasibility of Mobile Health Technologies for Detection of Common Mental Health Disorders, Treatment Engagement, and Adherence to Care in Nepal

Poster Presenter: Anvita Bhardwaj
Co-Authors: Sauharda Rai, Kiran Thapa, Prasansa Subba, Renasha Ghimire, Chaya Bhat, Eric Green, Brandon Alan Kohrt, M.D., Ph.D.

SUMMARY:

A global trend to address the burden of mental illnesses is to use lay community health workers (LCHWs) to identify persons with mental illness in the community, help them initiate care and adhere to treatment. Innovative digital mobile health (mHealth) technologies can be used to facilitate involvement of LCHWs in mental health services in low resource settings. mHealth applications in healthcare have shown promising clinical results. To explore the potential for mHealth technology use by LCHWs in Nepal, we conducted a study to assess the feasibility, acceptability, and utility of two technologies: (1) home sensing devices to assist in detecting mental illnesses and promoting adherence to care, and (2) a SMS (text messaging) treatment engagement system used to refer persons with mental illness in the community to primary care services and reduce delays in seeking treatment. The SMS system was designed to refer persons affected

by depression, alcohol use disorder, psychosis, post-traumatic stress disorder, epilepsy, antenatal depression, postnatal depression, and suicidal behavior. Before implementation of the mHealth applications, qualitative interviews were used to gauge acceptability, feasibility and utility of the application. Fourteen key informant interviews (KIIs) with LCHWs, 5 focus group discussions (FGDs) with LCHWs (n=31), 6 KIIs with community members, and 2 FGDs with community members (n=12) were conducted. Participants watched videos in which Nepali LCHWs used the technologies (videos are available at https://tinyurl.com/y7aa65m3). Participants scored devices according to standardized criteria for acceptability, feasibility and utility. We assessed these criteria using anchored vignettes, a qualitative method designed for low literacy populations. Qualitative findings demonstrated that home sensing devices are seen as feasible and acceptable given proper cultural adaptation and have high utility. For treatment engagement, we adapted the paper-based Community Informant Detection Tool (CIDT) to employ a SMS referral and tracking system, referred to as mCIDT. Forty LCHWs and 8 primary care workers were trained on the mCIDT platform. Results demonstrated an increase of approximately one new referral per week using the SMS system. Barriers to use of mCIDT were illiteracy among LCHWs, lack of familiarity with mobile phone functions, lack of recognition of the community burden of mental illness, preferences for other cadres of workers to take on the tool, and lack of mental health-trained primary care workers to receive referrals. Acceptability and feasibility of mHealth technologies and devices would be enhanced through improvements in technological literacy and transparency of data collection and data use in the health system, as well as increased awareness of the burden of mental illness in local communities. This study was supported by The Jacobs Foundation (Zurich, Switzerland) and the Duke Global Health Institute (Durham, USA).

No. 205

Preliminary Findings: Systematic Review Study of Schizophrenia App Usability and Engagement

Poster Presenter: Julia Tartaglia
Co-Author: John Torous, M.D.

SUMMARY:
Background: With the recent popularity of smartphone apps for schizophrenia, there had been a rise research studies examining the feasibility and acceptability of these novel monitoring and treatment tools. However, there is little literature examining the design, usability, and engagement features of such apps, which are important factors to determine their clinical feasibility. We conducted a systematic review of all studies reporting clinical, usability, and/or engagement outcomes of smartphone applications targeting patients with schizophrenia as the end-user (n=>1, SZ%=>50%). Methods: An electronic database search of PubMed, PsychInfo, Cochrane, and the Web of Science was conducted on June 26, 2017, which produced 186 results. Studies were systematically screened two independent reviewers, from which 14 eligible articles were identified. A systematic analysis was conducted based on pre-determined criteria that assessed the category of app, mobile features included, and outcomes reported (subdivided into clinical, usability and engagement outcomes). Papers were further compared based on study protocol, including study setting (lab or environment) and length of intervention. Results : Of the 14 studies, we identified 10 unique apps. The most common app category was symptom self-assessment tools and remote monitoring tools (8 apps), followed by clinical interventions (4 apps), on-demand health literacy (2 apps) and prescription-management tools (2 apps). Most apps utilized mobile features that required “active” user input., such as data entry through questionnaires using a sliding touch scale (used by 6 apps). “Passive” data collected utilized the following mobile features: mobile global positioning system, or GPS (3 apps), microphone (2 apps), accelerometer (2 apps), and light sensors (2 apps). All of the 7 papers that measured usability outcomes reported positive ease of use (80% satisfaction across scales reported). Ten papers measured engagement outcome metrics. Across apps, participants engaged with the app an average of 75.7% total days during the study period and responded to an average of 69.5% of prompts. Seven papers reported compliance metrics (defined as % of participants completing >33% of data points), which ranged from 40% to 88%. Study lengths varied

between 1 day (single use usability analysis) to 6 months. Conclusion: Though the data is limited on schizophrenia apps, positive usability outcomes reported suggests that smartphone interventions are both usable by patients with schizophrenia and that most participants are compliant with protocols. Although researchers are beginning to analyze app design, usability and engagement, there is little consistency in the study protocol and metrics, making it difficult to compare outcomes across papers. We propose app researchers adopt standardized metrics to assess ease of use and engagement.

No. 206

Patient Attitudes Toward Telepsychiatry: Survey Data From 61 Veterans at the Captain James A. Lovell Federal Health Care Center

Poster Presenter: Krushen Pillay, D.O.

SUMMARY:

Background: Telepsychiatry serves as a modality that has not been commonly adopted as a primary intervention in either an outpatient setting or inpatient setting. Although this modality may improve access to mental health care in rural areas and may even decrease costs of care, significant barriers to care include possible harm to the therapeutic alliance, technical difficulties, as well as resistance by providers. Methods: In our study which took place at the Lovell Federal Health Care Center in North Chicago, IL, patients were recruited and underwent surveys about their attitudes towards telepsychiatry. 61 veterans were surveyed following their telehealth appointments. The written questionnaire consisted of 5 questions in a Likert scale format in addition to an area for open opinions. One provider conducted all of the telepsychiatry visits. We found that the majority of patients were highly satisfied with their encounter. Results: Overall 95% of respondents approved of their telepsychiatry appointment. 62% of the respondents strongly agreed (5 on the Likert scale) that their relationship with their clinician did not differ from an in-person encounter. 80% of respondents strongly agreed that technical issues did not impair their clinical encounter. 80% strongly agreed that their needs were completely met and they would prefer telehealth over traveling to the clinic for their appointments. In ongoing phase 2 of the study, data is being collected on the differences in perception in providers' attitudes towards telepsychiatry which will be presented. Conclusion: Telepsychiatry appears to be a modality that is appreciated by patients, but underutilized by providers. Further research may be warranted to further investigate differences between in person visits and telepsychiatry visits. It is our intent to assess attitudes of psychiatrists with a similar survey posed to the patients. It may also be beneficial for further research into a hybrid model of care, where patients can be seen in person for some visits and via telepsychiatry for other visits. The study was not supported by any research funding.

No. 207

Mobile Integrated Neuropsychological Device Serving Evidence-Based Therapies (Mindset)

Poster Presenter: Ravi Varkki Chacko
Co-Authors: Omar Karadaghy, Elizabeth Russell, Chase Latour, Ryan Lindsay, Claude Robert Cloninger, M.D., Dehra A. Glueck, M.D.

SUMMARY:

Background: Mobile devices provide a unique ability to deliver behavioral health care in the wild. Pairing mobile devices with wearables allows the integration of heart rate (HR) and heart rate variability (HRV) data. HRV along with behavioral markers can provide a proxy for affective state [1]. This combination allows for novel personalized mental health care paradigms using ubiquitous devices [2]. However, the development of mobile therapies is systematically different from the development of other medical treatments. Here we propose, develop and test the clinical effectiveness of a mobile integrated neurofeedback device that detects moments of elevated physiological stress, and delivers in-the-moment evidence-based therapeutic exercises. Methods: The MINDSET application was developed for Android and iOS to pair with the MIO Alpha 2 wearable heart rate monitor (Mio Global. Vancouver, Canada). Mobile therapies included exercises from mindfulness [3], cognitive-behavioral therapy [4] and positive psychology [5]. Subjects engaged in mobile therapies after being notified or in a self-directed manner. Engagement goals and email feedback encouraged participation. We

employed standard HRV estimation [1] and motion classification methods to estimate physiological state. Initial testing was conducted with volunteers who submitted surveys before and after a month using MINDSET. After online app release, we analyzed usage statistics from 5823 downloads of Mindset from the app store. Next, we piloted the feasibility of MINDSET in clinical populations. Six participants with Tinnitus and comorbid depression used MINDSET features for 6 weeks. These subjects were surveyed with two Tinnitus inventories and the PHQ-9 before and after using MINDSET. Finally, the results from a population of 30 veterans with PTSD will be reported in February. Results: We demonstrate the proposed use case for MINDSET through recorded heart rate data with time stamped app events. A stressful event is followed by A) a notification, B) a therapeutic exercise, C) a reduction in HR and D) an increase in HRV. After one month's use, the sub-clinical population showed a reduction in feelings of anxiety (STAI)[6] and depression (BDI) [7]. MINDSET users returned an overall satisfaction of 4/5 stars. App-only users had a 2-week retention of 21%, triple the average of the average (7%). App-and-wearable users had a 2-week retention of 43%. The tinnitus cohort showed reductions in the Global Bothersome Score [8] (pre: 3.66, post: 3.00) and the PHQ-9 [9] (pre: 11.16, post: 9.66). Conclusions: We conclude that MINDSET can detect autonomic events and deliver clinically relevant therapeutic exercises. Data from sub-clinical users suggested that wearable incorporation doubles engagement. Initial pilot studies suggest that the MINDSET app may improve depression in clinical populations.

No. 208

How Facebook Has Influenced the Disclosure of Psychological Suffering

Poster Presenter: Ross E. Goldberg, M.D.
Co-Authors: Leah Susser, M.D., Julie B. Penzner, M.D.

SUMMARY:

The social media website Facebook has provided a new public and private venue for psychological expression. Airing of psychological grievances on Facebook has implications for the recognition of symptoms of mental illness, and for access to care for the affected individuals. In this case series, we present four patients, whose Facebook use led others to be concerned about their mental health, leading to inpatient hospitalization for each patient. Ms. A is a 49 year old female with a history of major depressive disorder and generalized anxiety disorder, who presented to the hospital when a friend notified police about a private Facebook message sent by Ms. A that stated, "I think I am going to go soon. I love you guys," with a photo of Ms. A with a noose around her neck. Ms. S is a 22 year old female without a formal psychiatric history who presented for her first hospitalization after her parents were alarmed by a series of public Facebook posts disclosing a history of sexual abuse. Mr. E is a 24 year old male with a history of bipolar disorder and multiple psychiatric hospitalizations, who was brought to the hospital when inappropriate Facebook posts revealed his manic behavior. Mr. M is a 27 year old male with a history of schizoaffective disorder, whose decompensation was identified after he posted on Facebook about his paranoid delusions about the Jewish people. Although any of these patients might have come to clinical attention even in the absence of Facebook, in all cases, the use of Facebook resulted in efficient provision of emergent mental health treatment. However, it is not known how often individuals post distressing content on Facebook that never comes to clinical attention. The potential utility of social media as a gateway to recognition of psychiatric decompensation should be characterized and investigated. Potential clinical and treatment implications include early recognition of problems, access to care, and interruption of suicide attempts. Software dedicated to recognition of irregular or alarming language or images might be helpful and is already in development. There are psychodynamic implications to use of a public forum such as Facebook for discussion of mental health symptoms, and exploration of such symptoms might create interesting fodder for psychiatric treatment. The unregulated, large, and open environment of Facebook was unavailable to previous generations, but is now ubiquitous. Facebook has proven important in cultural and social change, and problematic Facebook overuse is already being studied. It is both intriguing and culturally important to explore underlying demographics, diagnoses and characteristics of those who use Facebook in a manner that exposes their mental health problems.

As the presence of technology and social media continue to grow, an understanding of the interactions of these media with psychiatric presentation will be important to the recognition of symptoms and provision of care.

No. 209

Sometimes They Are Watching You: Using Social Media to Monitor Compliance With a Court-Ordered Treatment Plan When Substance Use Impairs Progress

Poster Presenter: Brandy Orr Kalami, D.O.
Co-Author: Kimberlee V. Wilson, D.O.

SUMMARY:

Mr. X is a 36-year-old Caucasian male with a history of poly-substance abuse of alcohol, cannabis, and intravenous methamphetamine. He presented for the first time to a psychiatric facility on an involuntary evaluation order. Written testimony by his father alleged the patient displayed bizarre behavior, would instigate fights with his sister and talk to himself late at night. The patient admitted to auditory hallucinations and had a fixed belief that the United States government was monitoring him through a computer-brain interface chip, which he believed was placed in his head during a dental procedure. The patient acted on these paranoid delusions by calling the United States Army, the Central Intelligence Agency, and various other entities and university departments in order to communicate with scientists about this inserted technology. After communication with a United States Army recruiting station, an agent with the Federal Bureau of Investigation visited the patient at home, and recommended to his father that the patient receive inpatient care at a psychiatric facility. Once evaluated and treated, he was stabilized on a second-generation antipsychotic long-acting injectable and discharged with a physician's recommendation of court-ordered participation in follow-up outpatient psychiatric care. An avid user of social media, Mr. X documented on video his daily activities for months leading to his hospitalization. Video included illicit drug use and verbal response to delusions. He created a social media page for people who believed themselves to be targeted and surveilled by the United States federal government. Months after discharge from the inpatient facility, he has continued to share his drug use and delusional activities, even documenting his monthly scheduled injections that were recommended by physicians and required by the mental health court. Using this case as an example, we will explore the considerations for recommending court-ordered outpatient psychiatric care, the physician's responsibilities to the patient and the public, and the advantages and disadvantages of legally required psychiatric treatment.

No. 210

Resident Development of Learning Modules for Teaching Ethics in Psychiatry With a Sample Case: Voluntary Stopping of Eating and Drinking

Poster Presenter: Chelsea Wolf, M.D.
Co-Authors: Melanie K. Miller, M.D., Jacqueline Norman, D.O., Donna T. Chen, M.D.

SUMMARY:

Background: Medical ethics is an important component of both undergraduate and graduate medical education. Particularly in psychiatry, there is frequently a need for cases to be addressed not only from a psychiatric perspective, but from an ethical one as well; the decision-making capacity of patients with severe mental illness may be less clear, patients may be hospitalized against their will, and societal resources to support those with mental illness are frequently sparse. As such, ethical decision-making skills are of great importance. At the University of Virginia (UVA) School of Medicine, medical students on their psychiatry rotations, as well psychiatry residents, expressed a desire for a more robust medical ethics curriculum, specifically as it pertains to psychiatric patients and cases. Objective: Given this, the co-presenters, fourth year psychiatry residents together with a faculty mentor, took a longitudinal developmental approach to creating a robust Ethics in Psychiatry thread through the curriculum for medical students and psychiatry residents at UVA following Kern's 6 steps of curriculum development for medical education(1): 1) problem identification and general needs assessment; 2) targeted needs assessment; 3) goals and objectives; 4) educational strategies; 5) implementation; and 6) evaluation. Description of proposed curricular design with case example: We chose in-person, case-based teaching modules with

a standardized format as an educational strategy. Multiple representative ethical cases were selected that could occur in either inpatient or outpatient settings and that could potentially result in different decisions. Reflection and discussion questions were framed around the specific ethical issues relevant to the case. Finally, an Instructor's Guide with a list of references for further reading was developed to enable other senior residents or faculty to lead a discussion regarding that particular ethical scenario. This poster will highlight the case of an elderly woman who refused nutrition and hydration as a means of suicide, and will address the important ethical topic of Voluntary Stopping of Eating and Drinking (VSED). Next Steps and Conclusion: Six 50-minute modules for teaching Ethics in Psychiatry will be presented monthly to medical students and residents. Ongoing evaluation and refinement of the modules as important components to a larger curriculum will be essential moving forward as we work towards improving the comfort with, and competence in, dealing with difficult ethical cases in the field of psychiatry.

No. 211

Physician Aid in Dying: A Health Care Worker Seeking Palliative Care as a Mechanism of Suicide

Poster Presenter: Daniel A. Neff, M.D.

SUMMARY:

This poster will present the clinical history of a fascinating patient who sought to use palliative care as a mechanism of suicide. Ms. W was an 82 yo woman with no significant past psychiatric history nor any significant medical problems. She had been retired from a fulfilling career as a surgical nurse and had an active social life with peers and younger women. She was widowed roughly ten years prior to presentation without significant impairment and had no children having married at 53 yo. The patient presented to my care after being discovered by a friend to be engaged in an ongoing attempt at starvation as a way to qualify for hospice care. She adamantly denied depression, or any disturbance of mood. She reasoned that she had started to notice some problems with mobility, and this caused her to conclude that she had arrived at a point where she could only be more of a burden to society than a benefit. As such, she adamantly maintained that the only ethical decision available to her was to commit suicide. She reasoned that starving herself to "the point of no return" would allow her to qualify for hospice and dignified death. After extensive bedside intervention by myself, the patient was agreeable to hospitalization on an academic Geriatric Psychiatry unit. She continued to insist she had no psychiatric problems and couldn't be dissuaded from her plans. The morning after transfer she was found in her room aphasic and not moving her right side. Rapid response protocol was initiated and she received therapeutic t-PA. Despite aggressive intervention she was found to have a completed infarction of the full territory of the middle cerebral artery and never recovered consciousness. Consistent with her wishes she was placed on hospice protocol and died a week later. Ms. W's stroke occurred on the morning of her birthday. After discussing the case, a presentation of ethical guidelines from the literature on physician aid in dying will be reviewed. Additional points from the literature will include key points of debate on the topic of "rational suicide" - if such a thing can exist. Furthermore, the poster will suggest the possibility that the stroke was not an accident but a completed suicide and explore questions of therapeutic futility in coerced care.

No. 212

Psychiatric Ethics Case Discussion Modules Developed by Residents: Covert Medication Administration/Medications Over Objection Case

Poster Presenter: Jacqueline Norman, D.O.
Co-Authors: Melanie K. Miller, M.D., Chelsea Wolf, M.D., Donna T. Chen, M.D.

SUMMARY:

Medical ethics as it pertains to psychiatry often deals with controversial cases that do not have one clear protocol to follow because these cases are not identical and can involve a vulnerable population of patients that may not have decision making capacity. For this reason, psychiatric ethics case discussion modules were developed by the University of Virginia (UVA) psychiatry residents with a faculty mentor to address ethical considerations that can be used in practical situations in both outpatient and inpatient settings. These modules are intended to allow the user to gain practical skills to address various ethical situations in psychiatric patients and

more specifically for enriching the curriculum for medical students as well as psychiatry residents at UVA. Each module includes a brief case scenario, reflection/discussion questions, further readings that relate to the case discussion and an instructor's guide to successfully facilitate a group discussion. This module will discuss the controversy of covert medication administration/medications over objection as an ethical dilemma that commonly arises when treating psychiatric patients. These case modules are intended to improve familiarity and competence in managing ethical cases in psychiatry.

No. 213

Ethical Dilemmas at the Intersection of Mental Illness and the Criminal Justice System: A Case Study

Poster Presenter: Jessica Marie Khan, M.D.

SUMMARY:

A 53-year-old African-American male with a long history of schizophrenia was hospitalized for a psychotic exacerbation and assigned to the care of a first-year resident. He displayed extreme disorganization, paranoia, and distrust of medication. His history was significant for three separate criminal incarcerations totaling over 25 years of imprisonment for seemingly minor thefts. Prior to sentencing, he went to the state psychiatric hospitals for restoration of competence. While in prison, he was frequently placed in solitary confinement because of disorganization, medication-nonadherence, and psychotic agitation. Preceding the onset of illness, he exhibited above-average academic performance and good social adjustment. He was married with 2 children and served as a Marine for 9 months before honorable discharge. His psychotic symptoms progressed in association with cannabis and cocaine use. Brief periods between incarcerations were marked by episodes of stabilization while he took antipsychotic medications. However, when he self-discontinued medications, he became floridly psychotic and committed minor crimes. He received little guidance on how to survive outside of prison and his schizophrenia was inadequately treated. When he arrived at our hospital, he was quite psychotic and suffered from anosognosia, making him very difficult to treat. Struggling to help this patient brought forth several ethical dilemmas. Wary of medical treatment and operating under the principle of autonomy, he refused medications many times. However, as demonstrated by his history, he was unable to maintain a safe environment for himself when psychotic and committed minor crimes that led to imprisonment. Knowing the high risks of nonadherence with subsequent psychotic exacerbation and possible imprisonment instilled a sense of duty and urgency in the clinician to treat the patient to prevent this bad outcome. The delicate balance between autonomy and beneficence is often challenging to negotiate and particularly difficult to learn as a resident. This patient also suffered from social injustice as he experienced reduced access to mental health care while incarcerated; had he had better treatment for psychosis, he may not have committed crimes. He lacked opportunities for employment and housing, as often happens to people stigmatized by a prison record and mental illness. In addition, his long-term imprisonment was expensive, harmful to his health, and provided little benefit to society as the patient was unable to be gainfully employed or support his family or community because of his severe symptoms. If he had received proper care early in his illness while he was in prison, his disease may not be as devastating and he may have been a productive member of society. Opportunities for intervention in this case will be outlined using the sequential intercept model and ethical challenges will be considered in the context of the physician's role and responsibility.

No. 214

Autism Spectrum Identification Rates in African American Children Remain Low Despite Otherwise High Mental Health Diagnosis Rate

Poster Presenter: Joseph Christman Hart, M.D.

SUMMARY:

Purpose: This cross-sectional analysis describes the prevalence of individual psychiatric disorders in African American and Caucasian children in West Virginia. Methods Medicaid claims data were collected between XX and XX, and analyzed for both African American and Caucasian children between ages 2-17. Only children who had a clinical encounter with a psychiatrist or psychologist were

included in the study. Chi square test was used to test for significance between racial groups. Results Data for 16,548 children was included in the study. There was an insufficient number of enrollees of other races to allow useful analyses: Asian, Hispanic, and Native American races collectively accounted for less than two percent of the population, so these were not included in the study. African American children were nearly five times as likely to receive a diagnosis of child abuse compared to Caucasian children (5.4% vs 1.1%). Rates of PTSD were similar (5.4% African American vs 1.5% Caucasian). African American children were also nearly twice as likely to receive a diagnosis of Adjustment Disorder or Major Depressive Disorder compared to (15.8% vs 8.5%). Interestingly, Caucasian children were considerably more likely to receive a diagnosis of Autism Spectrum Disorder (24.0% Caucasian vs 16.5% African American). Conclusion: Despite high rates of mental illness diagnosis rates in African American children, Autism Spectrum disorder remains identified considerably more frequently in Caucasian children.

No. 215

Seeking Expertise in Addressing Ethical Dilemmas in a Case of Anorexia Nervosa

Poster Presenter: Kruthika Sampathgiri, M.D.

SUMMARY:

Introduction The lifetime prevalence of anorexia nervosa in the United States adult general population is about 0.6 percent [1]. Psychiatry is often consulted to assess the decision making capacity of patients with delirium, psychosis or major neurocognitive disorders. In patients with eating disorders who have a high risk for medical complications this can often be a complex decision. They often meet the standard for being able to verbalize and explain their decision making process logically, while there is concern that they are making poor choices influenced by their prevailing or co-existing mental illness. Striking a balance between respecting patient autonomy and the desire to act in a beneficent manner is one of the ethical dilemmas we continue to face often [2]. Case Presentation We present the case of a 31 year old female, with past psychiatric history of Anorexia Nervosa, paraplegia secondary to a diving accident; admitted to the medical service for sinus bradycardia, requiring a permanent pacemaker and subsequent removal secondary to it being complicated by a small pneumothorax. Her inpatient course was also complicated by a stage IV sacral decubitus ulcer, requiring a surgery consultation. Psychiatry was consulted for patient's refusal of oral and PEG tube feeds and to assess her capacity for refusal of treatment. Initially, it was determined that she had the capacity based on her ability to understand the information presented to her, appreciate the diagnosis, medical risks and concerns involved and, infer the consequences of her choices [3]. We were faced with multiple dilemmas during her care, which included, were her decisions and poor choices due to her depression, and hence did she actually have the capacity to make decisions in this current mental state? If in fact she did lack capacity, and the next of kin was identified to help with decisions, would this necessarily change her outcome? In spite of expert opinions and recommendations from multiple teams which included Psychiatry, Surgery and Cardiology, she continued to refuse care, and her health deteriorated drastically. Palliative care was then consulted, and eventually a DNR was made in conjunction with her mother's agreement. The patient subsequently passed away two weeks following her admission. Discussion As medical professionals, we are inclined to prevent death and pressured to fix all problems, leading to aggressive treatment strategies. Having unrealistic expectations and goals, one can easily overlook the importance of providing emotional support and alleviate suffering. Some of the most common ethical dilemmas to steer through arise when the patient's desires conflicts with the physician's duty to look out for the patient's best interests. Knowing when to consult the right experts and to identify the best appropriate time to do this, keeping in mind patient satisfaction is of extreme importance in such scenarios.

No. 216

A Multidisciplinary Collaborative Approach to Address Substance Use and Mental Illness During Pregnancy to Promote Better Outcomes for the Infants

Poster Presenter: Howard Joseph Osofsky, M.D., Ph.D.

Co-Authors: Larry Burd, Natalia L. Rasgon, M.D.,

Ph.D., Erich J. Conrad, M.D., Joy Osofsky, Ph.D., Joshua Sparrow, M.D., Michele Many, Tonya Hansel, Ph.D., L.M.S.W.

SUMMARY:
Substance abuse during pregnancy and negative outcomes for newborns affects not only the individual but also society at large with the significant increases in frequency and severity. Concurrent with substance use is under-recognized serious mental illness which is often not identified or treated at this vulnerable time for both mother and newborn. Recent research demonstrates a large increase in newborns born dependent on opiods (Neonatal Abstinence Syndrome) as well as those diagnosed with Fetal Alcohol Syndrome resulting in increased costs associated with treating them at 1.5 billion dollars annually. In addition to services required to provide treatment for addicted mothers, long term services are often needed to meet the developmental needs of high risk infants. While, as many as 20% of pregnant women may experience new onset and recurrent major mood, anxiety, and even psychotic disorders during pregnancy, serious mental illness is often not addressed adequately during pregnancy and the postpartum period. Both substance use during pregnancy and mental health concerns can contribute to premature birth, biological risk, increased cesarean delivery, and post-partum depression. With increased risk for the mother and newborn, the infants may have medical and behavioral problems that can lead to more negative outcomes. The medical and mental health problems can also adversely affect parent-infant attachment and infant development. The Departments of Psychiatry, Obstetrics and Gynecology, and Pediatrics at Louisiana State University Health Sciences Center have developed a collaborative program to address this problem integrating medical and mental health services to increase the quality of care. The Department of Psychiatry provides evidence-based mental health and substance abuse consultation and services for pregnant women with plans to continue services during the perinatal and postnatal periods. Maternal and Infant Health (MIH) Specialists—social workers with expertise in trauma, serious mental illness, and substance abuse—collaborate with physicians and staff in working with high risk pregnant women when they present at the University Medical Center, Maternal Fetal Medicine Clinic and from other Obstetrical Clinics. Client participatory input is essential in program development. The MIH specialists meet with the mothers during prenatal appointments and using telepsychiatry to provide a supportive relationship during pregnancy and after the baby is born. Mental health professionals also provide education for physicians, residents, and hospital staff on mental health, infant mental health, motivational interviewing and evidence-informed parent-infant interventions such as the mother-infant Touchpoints intervention. His innovative and collaborative multidisciplinary program will benefit both mothers and infants and reduce short and long-term costs by increasing access to mental health support as part of overall health services.

No. 217

A Consult-Liaison Challenge: Serious Persistent Mental Illness, Terminal Disease, and Fighting Physicians

Poster Presenter: Samantha Zwiebel, M.D., M.A.

SUMMARY:
Introduction: This consult service case involved all four domains of bioethical principles—autonomy, non-maleficence, beneficence, and justice—with all domains in conflict, resulting in significant physician discord. There is little guidance for psychiatrists providing both consult and liaison services in cases where the patient's chronic mental health issues complicate care at the end of life when treatment is contentious. Case Description: The patient was a 53-year-old woman with schizoaffective disorder and persistently delusional and paranoid at baseline, well known to the state psychiatric hospital. After presenting there for psychosis, she was transferred to the academic hospital for pneumonia, but management of her previously diagnosed small cell lung cancer became a priority upon arrival. Her specific cancer was susceptible to chemotherapy but she never had outpatient care. Psychiatry was consulted because the patient was too psychotic to participate in treatment. Restarting the patient's psychotropic medications resulted in sedation, which led her husband to defer chemotherapy. Ethical Issues: During this time, discussion with the patient's providers at the state psychiatric hospital

revealed that she was rather headstrong and consistently refused most treatments. In their opinion she would not want or be able to participate in chemotherapy even in her best of mental health. One provider expressed distinct disgust at the plan for chemotherapy as a violation of what autonomy the patient could preserve, despite a clear lack of capacity. A meeting with Bioethics led to the attending oncologist blaming Psychiatry for poor control of symptoms that resulted in the patient's inability to have chemotherapy, causing a delay in potentially life-prolonging treatment solely because of mental illness. The oncologist interpreted acceptance of the patient's psychotic baseline as Psychiatry's incompetence and indifference, which in turn prevented the oncologist from delivering care. However, the resident physician on the Oncology team disagreed with offering chemotherapy from a medical perspective, and Internal Medicine asserted chemotherapy would be unethical insofar as it would prolong and promote suffering. Results: Ultimately, the attending oncologist rotated off service, the new oncologist was against chemotherapy, and the patient's husband decided in favor of palliative treatment. The patient expired within 2 weeks from status epilepticus due to brain metastases. Conclusion: In the aftermath of this case, the academic hospital held several meetings to address the issue of physician conflict, as this case was never truly resolved and remains ethically unsettling. This case also challenges the scope of consult-liaison psychiatry and the potential role of the psychiatrist in advocating for SPMI patients.

No. 218

The Role of Psychiatric Consultation in Cases of Rapidly Progressive Dementia: A Case and Literature Review

Poster Presenter: Daniel Shalev, M.D.
Co-Author: Nuri Jacoby

SUMMARY:

Background: Rapidly progressive dementias (RPDs) are a diverse group of illnesses with a progression to significant impairment in weeks to months. Although there are overlaps, the differential diagnosis of RPD differs markedly from that of the other dementias. Because RPDs may be mistaken for primary psychiatric disorders, and entail significant psychiatric symptom burden as they progress, psychiatrists are often involved in the diagnosis and management of these disorders. The aim of this presentation is to discuss a diagnostic dilemma in a case of RPD and to provide a narrative review of the literature on RPDs. Methods: A case report and a narrative review of the literature through targeted keyword searches of the MEDLINE database. Selected articles underwent two person review for relevance. Case: We describe a case of a 70 year-old woman without past psychiatric or neurologic history who initially presented to the psychiatric emergency department with one month of confusion, inability to perform ADLs, and psychotic symptoms, who was admitted to the neurology service with psychiatry consulting. The patient underwent extensive neuropsychiatric workup including imaging, EEG, CSF, and serum studies, which were significant primarily for mildly elevated inflammatory markers and a positive anti-thyroid peroxidase antibody titer. She was given a presumptive diagnosis of Hashimoto's encephalopathy and treated with steroids and with intravenous immunoglobulins, as well as lose dose antipsychotics for psychotic symptoms. She experienced only minimal improvement on this regimen and was ultimately discharged to a skilled nursing facility and workup was continued on an outpatient basis. Results and Discussion: Our search yielded 381 results, of which 34 were selected for review and 21 were included after screening for relevance and excluding articles pertaining only to prionopathies. Based on the literature and our case discussion, we elucidate the role of the psychiatric consultant in cases of RPD including: (1) diagnostic clarification (including a review of the differential diagnosis of RPDs) (2) management of behavioral and psychiatric symptoms (3) facilitating communication and education of the patients' families, and (4) liaison with the primary team around issues of therapeutic fatigue and hopelessness arising from diagnostic challenges and limited available therapeutic interventions. Conclusion: RPDs are a varied group of diagnostically and therapeutically challenging neuropsychiatric disorders. We utilize a case report and literature review to operationalize the important role of expert psychiatric consultation in the workup and management of patients presenting with RPD.

No. 219

Neurology Training for Psychiatry Residents: A Narrative Review

Poster Presenter: Daniel Shalev, M.D.
Co-Author: Nuri Jacoby

SUMMARY:

Objective: To formulate an operationalized approach to neurologic training of psychiatric residents based on review of existing guidelines and data. Background: Both the Accreditation Council for Graduate Medical Education (ACGME) Psychiatry Milestone Project and the American Board of Psychiatry and Neurology (ABPN) Core Competency Outline stipulate that psychiatry trainees should develop proficiency in the neurologic exam and an understanding of the intersection between psychiatric and neurologic disease. Although psychiatry residents are mandated to complete two months of full time clinical neurology, there is no standardized system for evaluating and sustaining clinical neurologic skills. Design/Methods: We conducted a narrative review of the literature on neurology education in psychiatry residency training from 1990 to 2016 using the EMBASE and MEDLINE databases. Included citations underwent two-person review for relevance and citation review. We additionally reviewed ACGME, ABPN, and American Neuropsychiatric Association (ANPA) guidelines pertinent to the neurologic training of psychiatric residents. Results: Our search yielded 291 unique EMBASE results and 605 unique MEDLINE results. Of these, 39 were for review and 26 were ultimately included. Based on data and existing ABPN, ACGME, and ANPA guidelines, the following neurology training goals were identified: (1) board-readiness, (2) ability to detect and triage neurologic conditions common to the psychiatric setting, and (3) use of clinical neurologic skills for the diagnosis and management of neuropsychiatric disorders. Barriers identified were: (1) poor standardization of clinical neurologic training among psychiatry residency programs, (2) progressively decreasing comfort with neurology as residents move into full-time psychiatric settings, perhaps contributed to by (3) generally low rates of neurologic and physical examination of patients in the primary psychiatric setting. Discussion: Based on our findings, we suggest a targeted approach to neurologic training of psychiatric residents including increased standardization of clinical neurologic experiences with emphasis on examination skills and neuroradiology, longitudinal neuropsychiatric supervision, and interdisciplinary training and didactic experiences on psychiatrically germane neurology topics.

Sunday, May 06, 2018

Poster Session 3

No. 1

Decreased Interoceptive Awareness Is Associated With Impaired Decision Making in Patients With Substance Use Disorders

Poster Presenter: Mehmet Bulent Sonmez
Co-Authors: Busra Subay, Rugul Kose Cinar, Yasemin Gorgulu, Mehmet Erdal Vardar

SUMMARY:

Background: The current study was prepared based on the assumption that awareness of the interoceptive processes may be disturbed in addicted individuals. The individuals with poor interoceptive awareness (IA), who are not able to utilize sufficiently body-relevant signals and rely on non-emotional sources to guide their decision-making, may choose more disadvantageous and fewer advantageous options in a complex and uncertain decision situation. Methods: The participants in the study included 80 abstinent male inpatients who were addicted to alcohol (n=40) or heroin (n=40) according to the DSM-5 criteria for substance use disorder (current severity: moderate or severe) and 40 healthy male volunteers. All participants performed the heartbeat perception (HBP) task as an objective physiological performance measure of IA and a computerized version of the Iowa Gambling Task (IGT) as a validated measure of decision-making. Results: Patients addicted to alcohol or heroin had similar IA, and their HBP scores were significantly lower than those of healthy control subjects ($p<0.05$). Patients addicted to alcohol or heroin had similar decision making performance and they performed significantly worse on the IGT compared to healthy controls ($p<0.05$). There was a significant positive correlation between

HBP scores and total net scores on IGT ($p<0.05$). Conclusion: As our main finding, a decrease in IA in addicted patients in comparison to healthy controls may provide support for the hypothesis that awareness of the interoceptive processes may be disturbed in addiction, and poor perception of somatic feedback in addicted individuals relates to decision-making processes in terms of selecting more disadvantageous and fewer advantageous options in complex and uncertain situations.

No. 2

Study on Psychosocial Factors and Cigarette Smoking in Schizophrenia

Poster Presenter: Mei Wai Lam, M.D., M.P.H.
Co-Authors: Alessandra Dumenigo, Bishoy Goubran, M.D., Marcos Sanchez-Gonzalez, M.D., Ph.D.

SUMMARY:

Background: The high prevalence of cigarette smoking in patients with schizophrenia (SCZ) has been traditionally attributed to the self-medication hypothesis which suggests that cigarette smoking helps patients cope with their symptoms and medication side effects. However, the association between smoking and psychosocial factors that may contribute to the high prevalence of smoking in schizophrenia is less understood. The aim of this study was to understand the social factors associated with cigarette smoking behaviors in patients with SCZ. We tested the hypothesis that psychosocial factors including social network and health literacy level influence smoking behaviors among patients with SCZ. Methods: Cross-sectional observational study was conducted involving 114 subjects with SCZ. Subjects were recruited from inpatient, partial hospitalization program and outpatient clinic. Questionnaires and scales including Short Assessment of Health Literacy (SAHL), Cohen's Social Network Index (SNI), Fagerstrom Test for Nicotine Dependence (FTND) and PANNS-6 (Short version of Positive and Negative Symptoms in Schizophrenia) were used. Results: There were 63.16% smokers in our sample (N=114), which was consistent with the high prevalence of smoking in SCZ in previous studies. The odds of being a smoker decreases by 79% in participants at clinic setting compared to participants at inpatient setting ($p=0.004$). In addition, concurrent drug use and alcohol use were significantly associated with cigarette smoking in the patients with schizophrenia. The odds of smoking was 3.4 times higher in patients using alcohol ($p=0.016$) and the odds of smoking was 3.9 times higher in patients using drugs ($p=0.0102$). Among the smokers, BMI ($p=.026$) and pack years ($p<0.0001$) were positively and significantly associated with FTND score. It was found that social network and health literacy did not play a role in predicting smoking. There was no significant difference in PANNS-6 scores among smokers and nonsmokers. Conclusion: Due to the high prevalence of smoking in patients with SCZ reported in other Western countries, the study results could likely be generalized to other mental health settings. Since the odds of being a smoker was found to be significantly less in outpatient clinic compared to inpatient setting, the result suggests that there was an association between severity of SCZ and smoking status. The significant association between cigarette smoking, alcohol use and drug use suggest that the factors associated with substance abuse must be taken into consideration together in this patient population. Further interventions intended to address concurrent nicotine, alcohol and drug use among patients with SCZ are warranted.

No. 3

WITHDRAWN

No. 4

Kratom-Induced Agitation of a Chronic User of Kratom

Poster Presenter: Michael R. Harrigan, M.D.
Co-Authors: Nirali Dave, Asghar Hossain, M.D., Avi Siwatch

SUMMARY:

Kratom (Mitragyna speciosa) is a plant that has long been used in Southeast Asia, dating as far back as the 1800s. It has been used for medicinal purposes such as: cough, diarrhea and intestinal infections. However, it is also known to have psychotropic effects such as euphoria, relaxation and anxiolytic properties , as well as pain relief similar to opiate medication. Based on this, kratom has been used as both as an opioid substitute and an aid for opiate withdrawal. Kratom can be consumed orally or smoked and is now widely available on the Internet

and on the streets with varying levels of legal status. Its popularity among the drug-using population continues to rise owing to new substance use related issues. Here, we present the case of a 20-year-old-male who has been consuming a large amount of kratom for an extended period of time who was admitted to a MICA inpatient unit with worsening anxiety and depression as well as increased agitation in the context of kratom intoxication/ withdrawal. He was managed with psychotropic medications for several days for withdrawal symptoms.

No. 5

How Effective Is D2 Partial Agonists at Eliminating the Cravings of Cannabis in a Psychotic Patient?

Poster Presenter: Myriane Isidore, M.D.

SUMMARY:

There is currently no medication that is approved by the Food and Drug Administration to help prevent relapse from cannabis misuse in a patient that has a comorbid diagnosis of either Schizophrenia or Schizoaffective Disorder. Patient's with dual diagnoses are highly prone to adverse outcomes in several domains such as increased symptom severity, increased rates of hospitalization, violence, victimization, homelessness and non-adherence to medication as well as poor overall response to pharmacologic treatment. The aim of this study is to determine if Abilify oral or long acting injection formulations will decrease the time it takes to relapse on cannabis during a one year interim. The standard treatment group will receive a typical antipsychotic, Haldol PO or Haldol Dec Injections and the time of relapse will be compared amongst the nonstandard Abilify treatment group. After patients have met the inclusion criteria, they will sign an informed consent in order to be included in the study. We will assess patient's relapse after patients voice recent drug use during therapy sessions or by evidence of a positive urine toxicology screen obtained from monthly outpatient visits. No personal information will be used and information will be entered in a password-protected Excel spreadsheet, accessed by the principal investigator and coordinators only. The data will be statistically analyzed to identify the differences in relapses amongst the standard and nonstandard treatment groups. Data will be available once study commences. This study will help the scientific community to better understand how effective D2 partial agonists will be at decreasing drug seeking behavior, reducing the intensity of cravings thereby increasing patient's compliance to treatment.

No. 6

A Slippery Slope: Abrupt Discontinuation of Phenibut Resulting in Mania With Psychotic Features

Poster Presenter: Nuzhat Hussain, M.D.
Co-Authors: Asfand Khan, M.D., Sanjay Yadav, M.D., Andrew Davis

SUMMARY:

We present a case of a 26 years old male with no significant past psychiatric history, who was admitted to our inpatient psychiatric facility for first episode of mania with psychotic features. The patient and his family reported that he was using Phenibut, a supplement he had purchased online and was using in escalating doses for the past 2 months. Once he realized the addictive potential of Phenibut, he stopped the supplement abruptly. Two days following discontinuation, he was observed to be acting in a "bizarre manner" and was later arrested after an altercation with the police. Patient's mental state continued to worsen during his 1 month stay in prison. He was admitted to the medical floor for suspicion of delirium. Basic laboratory tests and studies including EEG, CT scan and MRI brain were unrevealing. Lumbar puncture, Lyme titer and HIV screen were also negative. At the inpatient psychiatric facility, the patient endorsed delusions, stating he was "the son of God" and all people around him were "deities". He was notably disinhibited and required less amount of sleep. Thought process was prominent for loose associations and thought blocking; he also endorsed auditory hallucinations and appeared to be internally preoccupied. Over a period of 2 months, he failed trials of Risperidone, Lithium, Olanzapine and Valproic acid. Clozapine was initiated and titrated to a dose of 600 mg, which resulted in marginal improvement. ECT was commenced and the patient's symptoms showed marked improvement after 4 sessions. He was later discharged on maintenance ECT and 400 mg daily dose of

Clozapine. Discussion: Phenibut, primarily a GABA-B analog and to a lesser extent GABA- A, is known to have anxiolytic and cognition enhancing properties. It is approved for use in several countries for multiple indications including anxiety disorders, alcohol withdrawal and insomnia.2 Phenibut is not FDA approved in US, but is widely available via the internet. Phenibut's euphoric properties along with quick development of tolerance make it a potentially addictive substance. Moreover, abrupt discontinuation can result in withdrawal symptoms ranging from rebound anxiety, insomnia, restlessness, delirium, agitation and frank hallucinations. 1 These symptoms are similar to withdrawal from GABA-ergic agents such as benzodiazepines and Baclofen. In our case, Phenibut withdrawal, appears to have precipitated a manic episode with psychotic features. Due to easy accessibility, use of Phenibut has greatly increased over time. Lack of regulatory status and limited research on the clinical effects of Phenibut pose a significant public safety risk and ongoing challenges for physicians in identification and management of Phenibut related intoxication and withdrawal syndromes.

No. 7

Cognitive Impairment Due to Synthetic Cannabinoids (K2) Use and Psychosis

Poster Presenter: Omotola O. T'Sarumi, M.D.
Co-Author: Uchechukwu Nnamdi, M.D.

SUMMARY:

Synthetic cannabis (synthetic marijuana), or technically synthetic cannabinoid receptor agonists are designer drugs that mimic the effects of cannabis sprayed onto a herbal base material. It was first sold under the name "Spice," the drug has evolved into many different names (e.g., Black Diamond, Mojo, Spice Gold, Aroma, Dream, Genie, and Silver). K2 or "Spice" is made of a C8 homolog of the non-classical cannabinoid CP-47, 497, 497-C8 (cannabicyclohexanol) and a cannabimimetic aminoalkylindole called JWH-018 In humans, psychoactive cannabinoids produce euphoria, enhancement of sensory perception, tachycardia, antinociception, difficulties in concentration and impairment of memory. The cognitive deficiencies seem to persist after withdrawal. The toxicity of marijuana has been underestimated for a long time, since recent findings reveal -THC-induced cell death with shrinkage of neurons and DNA fragmentation in the hippocampus. The acute effects of cannabinoids as well as the development of tolerance are mediated by G protein-coupled cannabinoid receptors. The CB1 receptor and its splice variant CB1A, are found predominantly in the brain with highest densities in the hippocampus, cerebellum and striatum. This case reports a 26 year old man with no prior psychiatric diagnosis who developed cognitive impairment and psychosis after the use of synthetic cannabinoids. In this case report, we also discuss the updated evidence base on the effect of delta-9- tetrahydrocannabinol (THC) on the brain.
Keywords Marijuana, THC, Psychomotor Memory, Synthetic Cannabinoids, Cognitive Impairment

No. 8

A Preliminary Study for the Affective Style of Adults With Internet Gaming Disorder

Poster Presenter: Pei-Yun Lin
Co-Author: Chih-Hung Ko

SUMMARY:

Background: Loss of control in internet gaming could result in a negative consequences. The dyscontrol internet gaming had been defined as internet gaming disorder (IGD) in DSM-5. The study aimed to evaluate the affective regulation style of adults with IGD and the association between affective style and depression and anxiety of IGD. Methods: A total of 47 young adults with internet gaming disorder and 47 gender and age matched controls were recruited by advertisement. The classification was based on diagnostic interviewing based on DSM-5 research criteria and gaming behavior evaluation. They are arranged to complete the questionnaire for gaming behaviors, affective style questionnaire, Chen internet addiction scale (CIAS), the Penn state worried questionnaire(PSWQ) and the center of epidemiological studies depression scale (CESD). Results: There is no difference in gender (38 male and 8 female) and age (26.21±4.47 versus 26.68±4.34) between IGD group and controls. The t test demonstrated that IGD group had lower score in affective adjustment and higher score in CIAS, PSWQ, and CESD than controls. Further, the Pearson's correlation demonstrated that affective

adjustment negatively associated with the CESD and PSWQ score among IGD group. Further, the CESD and PSWQ score was positively associated with CIAS score. The logistic regression for IGD with control of gender, age, educational level, demonstrated that lower affective adjustment and higher affective concealing associated with IGD. However, these association became insignificant when the score of CESD enter the model. This result might suggest that depression mediated the association between affective adjustment and IGD. Conclusion: The presenting study suggested that lower affective adjustment and higher affective concealing could associated with the vulnerability of IGD. This would suggest that the emotional regulation ability should be well assessed and promoted among young adults with IGD. Besides, the affective adjustment was negatively associated with depression in IGD group. As depression could be one risk factor of IGD, intervention to promote affective adjustment, such as emotion reappraisal, might benefit subjects with IGD. Further, the depression could mediate the association between affective style and IGD. Thus, intervention to treat depression of IGD, such as antidepressants or exercise, might attenuate the association between affective style and IGD.

No. 9

Analyzing Substance Use Disorders/Patterns Among Oupatient HIV Patient Population Based on Various Demographic Factors

Poster Presenter: Rahul Patel, M.D., M.P.H.

SUMMARY:

INTRODUCTION: Human Immunodeficiency Virus (HIV) continues to be a major healthcare problem in the United States. As per CDC data; At the end of 2014, an estimated 1.1 million persons aged 13 and older were living with HIV infection in the United States. There are more than 1.2 million people living with HIV in the United States. Substance use, abuse, and dependence continue to be a major public health poblem and when studies into the HIV infected patient population. It is imperative to study gender based differences in substance use disorders within this sub-population in order to make and impliment health care policies. METHOD Our Sample population included HIV positive patients with substance use disorders and co-occuring mood disorders in a community outpatient clinic. Patients' substance use disorders were identified from the Drug Use Disorders Identification Test (DUDIT). Patients' sociodemographic variables were age (years), gender, race/ethnicity, education, employment, living status and have children. Clinical characteristics included years of diagnosis, CD4, viral load, Axis I Major depression and bipolar.The primary objective of this study was to analyze HIV positive patients with co-occuring mood disorders and alcohol use disorders in order to characterize gender differences associated with other social/demographic characteristics. Both univariable and multivariable logistic regression analysis were performed. RESULTS Based on the inclusion and exclusion criteria, 195 patients were identified with HIV+, Alcoholism and mood disorders. 61.5% patients are male and 38.5% are female. Overall, 43.1% patients used cocaine, 41.0% patients used cannabis and 14.9% used other substance (table 1).Male patients had higher total alcohol score than females (p=0.03), but we did not find significant difference in total drug score and age between male and female.Among 84 patients that used cocaine, 36 patients snorted cocaine (51% male and 31% female), 37 patients used crack cocaine (37% male and 54% female) and 11 patients used both (12% male and 15% female). Female patients had higher proportion in crack cocaine, but we did not find the significance in both univariable and multivariable models. CONCLUSION: This study was aimed to elucidate gender differences in an outpatient clinic HIV positive population with substance use disorders. Interestingly, we did not find a difference between female and male patient's drug use. We did find that of the people who snorted cocaine, only 31% were female while 51% were male. However, if we looked at the crack cocaine numbers, we saw a significantly higher proportion of women using crack at 54% compared to men at 37%.

No. 10

Self-Exclusion Program: "A Possible Tool"

Poster Presenter: Raul Quiroga

Lead Author: Raul Quiroga

Co-Authors: Andrea Espinardi, Lucía Bianconi

SUMMARY:

The Self-Exclusion is a tool that can implement the

Responsible Gaming Programs. It places inside the actions of Secondary Prevention, that is to say when "the game is a problem". It provides the possibility to the bettors, who like that need it, not being admitted to gaming rooms. We speak about tool because it only refers to the management of the symptoms of "abstinence" and possible relapses, that is, we understand self-exclusion as an auxiliary tool that contributes or helps in solving the problem or disease, in an supplementary way. This tool is only effective if the person concerned has taken "consciousness" for him her, throughout relatives or by therapeutic indication concerning about the situation experienced. From the Responsible Gaming Program of the Lottery of Córdoba State Society it was defined that the subscription to the self-exclusion program is voluntary. It lasts 4 years and its scope is Provincial. Its character is irrevocable with the exception of judicial order. The application is available on the web or in places of subscription, but it is only valid when completed in front of the staff designated for this purpose. This regime is confidential as for the preservation of the information of the applicant except under judicial requirement or of the solicitor. The process is personally and with companionship. The applicant must be presented with a national identity document (ID), two updates colored pictures, and photocopy of the ID. The accompaniment must show the ID too. The applicant commits to: Initiate specialized Treatment. Present every 6 (six) months certificate extended by a professional at the expense of this treatment and/or institution attend. In case the agreement is not completed, the term is extended automatically for 4 more years. On the part of the Lottery of Córdoba, it must guarantee the fulfillment of the agreement by arbitrating the means necessary for this purpose. In case of violating the agreement a sanction is contemplated. The violation is reflected in an Act of Infraction. The Act is valid even with the signature of the security personnel of safety. The penalty is accumulative. At the end of the requested period, an additional 4 years are applied for each violation report. The Program has signed 2092 self-exclusion applications since its beginning in November 2008; the distribution for sex of the applicants is 1425 men and 667 women. Of the historical total 892 people expired the stipulated period, 585 people requested the renovation and 615 are the new adherents. An articulated work is made between the Responsible Gaming Program - Personnel of Casinos and gaming rooms - Private Company Personnel (CET S.E.) for the implementation of the Self-Exclusion Program In conclusion, Self-Exclusion as a coadjuvant tool for psychotherapeutic treatment, taking into account the low adherence rates.

No. 11

Go Gaba Gaba! A Case Report of a 64-Year-Old Female With Chronic Opioid Withdrawal-Induced Back Pain, Anxiety, and Insomnia Managed With Gabapentin

Poster Presenter: Richard Stark
Co-Author: Consuelo C. Cagande, M.D.

SUMMARY:
Chronic opioid use and subsequent addiction is one of the largest problems facing American medicine today. The importance of devising how to best help chronic users discontinue their opioids and overcome the hurdle of withdrawal symptoms is a essential research area. The purpose of this case is to describe the use of gabapentin as an alternate treatment to manage the chronic withdrawal symptoms of a patient who took high-dose opioids for years. A 64-year-old female with a history of loin pain hematuria syndrome (LPHS) presented with 10 months of insomnia, back pain, and anxiety after discontinuing narcotic use. She was provided with behavioral counseling and pharmacologic intervention, which included gabapentin and a decreased dose of mirtazapine. The result was a dramatic increase in her sleep and a decrease in her pain and anxiety, allowing her to finally live an active and normal life after 25 years of chronic pain.

No. 12

Neuro-Education for the New Millennium: Innovating Medical Education Using Brain Based Teaching

Poster Presenter: Kevin H. Yang, D.O.
Co-Author: Vineeth John, M.D., M.B.A.

SUMMARY:
Ever since the Flexner Report, medical education has gone through manifold changes to take advantage of developments in the fields of adult education,

learning theories and varieties of learning delivery. In our technologically advanced age, the challenge continues to come up with a consistent set of learning principles around which to structure the bulk of undergraduate and graduate medical education. Given the vast volume of information expected to be learned and the summarily short time limit in which to learn it, many medical students and residents end up relying on third-party applications and non-traditional methods to succeed in the short-term. The challenges in information retention have ramifications even when the medical student transitions into residency and then as an independent professional stage. The effectiveness of lifetime learning programs such as annual CME are indeed limited. By analyzing the current educational research on neurological correlates for optimal learning, we seek to provide both an overview and real-world examples of various innovative medical education techniques. Most importantly, we would like to focus on improving each step of the learning cycle by: (1) enhancing information gathering abilities through sustained attention and providing emotional triggers for memory association (2) allowing for reflection with spaced repetition techniques built into the learning and training curriculum (3) engaging in creation through social stimuli to encourage manipulation of learned information (4) utilizing active testing through forced recall and question banks to ensure long-term retention of information. The presentation will reference studies showing the effectiveness of brain based teaching techniques and would also explore the potential for implementing such techniques into medical school curriculum and residency training programs.

No. 13

Long-Term Sequelae of Hallucinogen Use: Persisting Perception Disorder in the Context of LSD

Poster Presenter: Kevin H. Yang, D.O.

SUMMARY:

Mr. M is a 30 year old male who presented to the Emergency Department upon referral from a neurology clinic for an acute confusional state with hallucinations and perceptual disturbances. He had no notable psychiatric history or seizure history and was developmentally normal. His substance use included LSD use 2-3 years ago, use of psychedelic mushrooms 2 months ago, and continued marijuana use several times a month. Patient's last use of Cannabis was two weeks ago which was consistent with urine toxicology obtained on admission. Patient endorsed several unusual episodes over the past few years, including: (1) a feeling of traveling back in time to a previous city he had lived in (2) the environment around him changing to become more 'ominous and supernatural' (3) an interviewer's face morphing into his father's with the periphery phasing out (4) colors appearing throughout his vision (5) a bright spot throughout his vision with a bright zigzag following it (6) objects such as streetlights and buildings appearing to change dimension and 'lean over him' with a sense of impending doom (7) people appearing as though they were moving even while standing still. Long-term EEG monitoring did not show any epileptiform discharges or focal abnormalities even during reported 'typical' episodes. Given the lack of neurological or other medical explanation for these episodes and the consistency with which his symptoms match reported descriptions of Hallucinogen Persisting Perception Disorder (HPPD), we believe these findings are consistent with long-term sequelae of past LSD and psychedelic mushroom use, however remote. This case describes a classic clinical presentation of HPPD and highlight the importance of a thorough history-taking, medical, psychiatric, and neurological workup in diagnosing this disorder.

No. 14

Risperidone-Induced Amenorrhea in the Absence of Hyperprolactinemia

Poster Presenter: Muhammad Navaid Iqbal, M.D.
Co-Authors: Steven Vayalumkal, Mehwish Hina, Asghar Hossain, M.D.

SUMMARY:

Abstract One of the most well-known adverse effects of antipsychotic medications is hyperprolactinemia. Hyperprolactinemia can lead to a variety of symptoms as galactorrhea, oligomenorrhea, amenorrhea, and decreased libido. Due to its high affinity for D2 receptors, risperidone can block dopamine receptors in the Tubero-Infundibular pathway, resulting in elevated prolactin levels. Here,

we present the case of a patient who developed amenorrhea while on risperidone therapy with normal prolactin levels, whose menses resumed after discontinuation of risperidone. The patient is a 39-year-old female with no past psychiatric history of mental illness started exhibiting psychotic symptoms such as persecutory delusions, agitation, aggression, sexual preoccupation, and disorganized speech. The patient was hospitalized and risperidone 3mg BID was initiated. The patient's symptoms subsequently improved and she was discharged to home. A few months after risperidone was initiated, the patient noted that she had stopped menstruating. Prior to beginning antipsychotic therapy, menses occurred at regular intervals. The patient prolactin levels, thyroid function tests, FSH, LH, estrogen, progesterone, and DHEA levels, all of which were within normal limits. The decision was then made to discontinue risperidone and begin aripiprazole. Following this change in management, the patient's menses resumed as normal and she remained psychiatrically stable. Risperidone, as with other antipsychotic medications, is associated with a wide array of metabolic side effects including diminished libido, impotence, anovulation, irregular or absent menses, galactorrhea, and decreased estrogen and testosterone levels. Multiple case reports have shown increased prolactin levels in patients on risperidone therapy, and it has been shown that upon switching to another antipsychotic medication, including quetiapine, ziprasidone, and olanzapine, the hyperprolactinemia resolved. In the case of our patient above, amenorrhea occurred despite prolactin levels within the normal range. Other causes of amenorrhea, such as pregnancy, thyroid disease, and hormonal imbalance, were excluded in the patient. Upon switching her antipsychotic therapy to aripiprazole, the patient's menses resumed as normal without any disturbance in her psychiatric course. The use of antipsychotic agents, especially risperidone, carries with it the risk of adverse metabolic effects. Hyperprolactinemia due to these medications can cause a variety of metabolic symptoms, and both physicians and patients should be aware of these. In the majority of cases, these effects will manifest themselves in conjunction with elevated serum prolactin concentrations. The patient above presented with symptoms of amenorrhea in the absence of hyperprolactinemia that resolved once her medications were discontinued. Thus, it is important for physicians to remain aware of such cases in the future, as they may impact the choice of managemen

No. 15

Role of Quetiapine in Cannabis Use Disorder: A Systemic Review

Poster Presenter: Muhammad Navaid Iqbal, M.D.
Co-Authors: Mehwish Hina, Ghulam Sajjad Khan, M.B.B.S., Asghar Hossain, M.D.

SUMMARY:

Cannabis is one of the most prevalent abuse drugs across United States among adult population. The primary mode of action is its partial agonistic property on CB1 receptors in brain. The medical use of cannabis had been in much debate in previous years. It's use in this domain is variable and had been tried in chronic pain and spasticity with limited efficacy. The withdrawl effects of cannabis may include insomnia, irritability, restlessness, depression and mood swings. Long-term use may induce cognitive deficits and lapses in working memory. Very limited data is available on treatment modalities in managing cannabis use disorder. Quetiapine, an atypical antipsychotic has been used to diminish the frequency of cravings for cannabis use. In cases of significant cannabis use, patient may develop psychosis due to increase dopamine concentration in synapses. In such cases quetiapine helps in balancing dopamine levels leading to alleviation of psychotic symptoms. In one study, 200mg of quetiapine has shown efficacy with good tolerability in managing cases of cannabis use with associated withdrawl symptoms. Quetiapine has also been used in treating agitation in context of cannabis withdrawl. This effect is attributable to sedative property of quetiapine at lower doses. Considering the recent rise in cannabis use, various available literatures advocate for treatment strategy targeting the associated withdrawal symptoms but not cravings. Though, there is no recommended psychotropic medications for cannabis use disorder, quetiapine has shown efficacy in terms of ameliorating symptoms of agitation, insomnia, irritability and restlessness in context of cannabis use. This systemic review highlights the use of

quetiapine in cannabis use disorder in context of associated withdrawl symptoms and cravings.

No. 16

The Combination of Low-Dose Topiramate and Quetiapine in Chronic Alcohol Use Disorder: A Case Report

Poster Presenter: Muhammad Navaid Iqbal, M.D.
Co-Authors: Mehwish Hina, William Levitt, M.D., Rimon Levy

SUMMARY:

Alcohol use disorder carries significant morbidity and mortality impacting various psychosocial aspects including psychiatric and medical consequences. Maintaining abstinence from alcohol use with both psychotherapeutic and pharmacotherapeutic interventions stands out as the prime modality of management. This case report has shown safe and efficacious treatment in maintaining remission from alcohol dependence with low dose topiramate and quetiapine. This in contrast to the FDA approved medications, naltrexone, disulfiram and acamprosate, which did not show adequate response in this resistant case of alcohol use disorder. OBJECTIVE: The objective of this article is to report a case of alcohol use disorder that responded well with combination therapy of low dose topiramate and quetiapine enabling abstinence from alcohol use with significant reduction in frequency of cravings in the context of inadequate response to FDA-approved naltrexone and acamprosate for alcohol dependence. CASE: 31-year-old Hispanic Male with history of extensive alcohol use presented to our behavioral health outpatient clinic with frequent cravings for alcohol use along with subtle depressive and anxiety symptoms. Patient responded inadequately to monthly naltrexone injections leading to relapse on alcohol use. He was later switched to oral acamprosate with inadequate response on therapeutic dosing. He then, recommended with low dose oral topiramate (100mg) and quetiapine (150 mg), which led to significant alleviation of his cravings of alcohol enabling remission. This combination regiment was well tolerated. DISCUSSION: Review of available literature has shown that alcohol disrupts mesolimbic-dopamine pathway culminating into indirect release of dopamine via GABA system within reward system. Consistent stimulation of this pathway leads to positive reinforcement for alcohol use. Multiple studies have shown effective use of naltrexone, disulfiram and acamprosate in maintaining abstinence from alcohol use with substantial reduction in its cravings. Few articles support use of non- FDA medications like topiramate, quetiapine, and gabapentin. We have seen in this case how low dose combination therapy with topiramate and quetiapine helped this patient in maintaining remission from alcohol use along with significant reduction in symptoms of withdrawal. CONCLUSION: In this case report, we have observed how low dose topiramate along with quetiapine found to be effective in ameliorating cravings for alcohol use along with alleviation of subtle symptoms of depression and anxiety coexistent with it. This patient failed to maintain abstinence from alcohol use while on naltrexone and acamprosate at different times. The combined psychotherapeutic intervention enabled us to highlight alternate treatment modality in resistant cases of alcohol dependence.

No. 17

Dual Cases: The Emergence of Substance Use Disorders Following Bariatric Weight Loss Surgery

Poster Presenter: Sameerah F. Akhtar, M.D.
Co-Author: Asghar Hossain, M.D.

SUMMARY:

We report two cases of female patients who developed substance use disorders within three years after bariatric surgery. One case of a 41 year old African American female who presented to the emergency room seeking treatment for alcohol and opioid abuse, as well as depressive symptoms. Patient reported she socially drank alcohol prior to her Bariatric surgery two years ago. After the surgery she was given opioid pain medication for post surgery pain. She developed opioid dependence and also start consuming alcohol daily which she attributed to her decreased appetite. The second case was a 37 year old Caucasian female who presented to the emergency room seeking treatment for alcohol, cocaine, and opiate abuse. She had bariatric surgery five years prior to presentation and also reports daily alcohol consumption only after the surgery. This patient was

also prescribed opioid pain medication and developed an addiction which several years later lead to intravenous heroin abuse. Cocaine was also used in increased amounts post surgery. In these cases both females claimed their daily substance use occurred post-bariatric surgery. Bariatric surgery, also referred to as weight loss surgery (WLS), is the most effective weight loss treatment for clinically severe or morbid obesity and has been gaining popularity (1). Physiological changes resulting from gastric bypass surgery may help to explain heightened postoperative alcohol sensitivity. Specifically, the portion of the stomach that secretes alcohol dehydrogenase, an enzyme that plays a significant role in alcohol metabolism, is circumvented following the procedure (2), and rapid emptying of the gastric pouch, particularly for liquids, facilitates quick absorption of alcohol into the jejunum (3). Opioids may be attractive to WLS patients because of their effects on the gastrointestinal tract, which counter those induced by WLS. In particular, opioids decrease gastric motility and increase transit time (4), which could conceivably mitigate adverse effects associated with post-WLS "dumping syndrome" (a condition characterized by dizziness, nausea, cramps, bloating, diarrhea, fatigue, shakiness, chills, and hot flashes, particularly following consumption of sweet foods).With this evidence it has been suggested the providers address these issues with patients prior to and following bariatric surgery to reduce the rates of substance use post surgical procedure.

No. 18

Addressing the "Culture of Death": How Popular Media Has Glamorized Suicide Leading to Increased Suicide Attempts Among Teens

Poster Presenter: Sameerah F. Akhtar, M.D.
Co-Author: Asghar Hossain, M.D.

SUMMARY:

Suicide is the third leading cause of death among adolescents, accounting for a greater number of deaths than the next seven leading causes of death combined for 15- to 24-year-olds (1). Almost 1 in 12 adolescents in high school made a suicide attempt, and 17% of adolescents seriously considered making a suicide attempt, in the calendar year 2005 (2). In the United States, suicide rates doubled in the 15- to 19-year age group and tripled in the 10- to 14-year age group between the 1960s and the 1990s (3). Although the exact precipitant of these increased rates is uncertain it is largely believed that some of the contributing factors may be drug and alcohol abuse, unstable home environments, and lack of mental health treatment. More recently suicide has been glamorized in the media. A recent film "13 Reasons Why" depicts a teen who commits suicide after harassment and mistreatment by peers. Other examples include the more recent "Blue Whale Challenge" which is an online game centered around a curator that instructs individuals to perform stepwise tasks and ultimately leads to the final task of suicide. Social media outlets have also promoted "Killfies" which are photographs that encourage individuals to pose in risky and life threatening poses. Much concern has been posed on the impact of this form of media portrayal and how it will affect the rates of suicide in the teenage population. CONCLUSION: It is highly debated whether internet use and social media content plays an influential role on population suicide rates. Although limited, several preliminary studies have begun to address this topic. For example, Shah conducted a cross-national study that examined the association between general population suicide rates and the prevalence of Internet users, using data from the World Health Organization's and the United Nations Development Program's Web sites. Shah showed that the prevalence of Internet users was positively correlated with general population suicide rates (4). Another concern is the media contagion effect. (5-6). The media's influence on suicidal behavior, especially suicide methods used, has been well documented, and social media may possibly increase the risk of the media contagion effect, especially among young people. (7-8). A recent study by Dunlop, specifically examined possible contagion effects on suicidal behavior via the Internet and social media. Of 719 individuals aged 14 to 24 years, 79% reported being exposed to suicide-related content through family, friends, and traditional news media such as newspapers, and 59% found such content through Internet sources.(9) Younger people seem to be most vulnerable to the influence of the medi

No. 19

The Role of Suboxone as a Treatmelnt Modality for Borderline Personality Disorder

Poster Presenter: Sameerah F. Akhtar, M.D.
Co-Authors: Ali Raza, Zohaib Majid, Asghar Hossain, M.D.

SUMMARY:

BACKGROUND Borderline personality disorder is characterized by dysregulation of emotion processing that manifest as affective lability and impulsive behaviors including aggression and self-harm. (3)The disorder is common in both the general population and in clinical settings. According to statistics in the point prevalence of borderline personality disorder in the United States is 1.6 percent in the general population and the lifetime prevalence is 5.9 percent (1) Psychotherapy is only partially efficacious and while patients may respond to medications there is no FDA approved medication for this disorder.(2) A 2010 review by Cochrane found that no medications showed promise for the core symptoms of borderline personality disorder including chronic feelings of emptiness, identity disturbances and abandonment but some medications have been helpful for isolated symptoms exhibited in this disorder (5). OBJECTIVE: The objective of this literature review is to investigate the role of the endogenous opioid system and its association with borderline personality METHOD: Literature from Pubmed, Uptodate, and The American Journal of Psychiatry were revised. CONCLUSION The dysregulation exemplified in borderline personality is characterized by short-duration, often severe, rapidly changing mood states that are highly reactive to environmental stimuli. Patients appear to react more quickly, with greater intensity and a slower return to baseline state endogenous opioid system. (3) A study suggested that the classic borderline personality symptoms which included risky sexual behavior, attention seeking may be explained by attempts to use the rewarding effects mediated by the endogenous opioid system. Anhedonia and feelings of emptiness may be an expression of reduced activity of the endogenous opioid system. Additionally patients with borderline personality tend to abuse substances that target mu-opioid receptors. The endogenous opioid system and ?-receptors are thought to be involved in borderline personality disorder because of increases in pain thresholds and dissociative phenomena that are reversed by opioid antagonists (4).Another study suggested the classic symptoms of borderline personality including risky sexual behavior, attention seeking may be explained by attempts to use the rewarding effects mediated by the endogenous opioid system. Anhedonia and feelings of emptiness may be an expression of reduced activity of the endogenous opioid system. Additionally patients with borderline personality tend to abuse substances that target mu-opioid receptors.(6). Though promising more data is however required to say with certainty if there is a definitive link between borderline personality disorder and endogenous opioid systems.

No. 20

Estrogen Therapy as an Adjunctive Treatment Modality in Schizophrenia

Poster Presenter: Sameerah F. Akhtar, M.D.
Co-Author: Asghar Hossain, M.D.

SUMMARY:

Schizophrenia is a neuropsychiatric disorder that affects thought, emotion, and behaviour with symptomatology being classified within three main clusters: positive symptoms, negative symptoms, and cognitive deficits (1). Positive symptoms include delusions, hallucinations, and disorganized thoughts while negative symptoms include apathy, anhedonia, social isolation, blunting of affect, and poverty of speech. Presently, the primary treatment for schizophrenia is antipsychotic medications, which predominantly target the dopaminergic system (2). Though antipsychotics have proven to be effective in the treatment of positive symptoms they are less efficacious in targeting negative and cognitive symptoms in Schizophrenia. Several characteristics have been closely observed in individuals with schizophrenia including the age of onset, symptomatology, and outcome of antipsychotic treatment differences between men and women (3). The estrogen hypothesis has been proposed to account for these gender differences and suggests that estrogen provides protection from the development of schizophrenia and mitigates the severity of negative symptoms (4). OBJECTIVE: The objective of this literature review is to investigate

the role of estrogen therapy as an adjunctive treatment modality in Schizoprenia METHOD: Literature from Pubmed and The American Journal of Psychiatry were revised. CONCLUSION: Although estrogen is known to be a female hormone its is present in different degrees in both sexes. Studies suggest that estrogen has neuroprotective properties. Accumulating evidence has led to the hypothesis that recurrent hormone influxes in women serve as a protective factor in the initial development of schizophrenia (4). Thus, in recent years an increasing amount of literature has explored estrogen therapy as a potential form of treatment for schizophrenia (5). One cross-sectional study compared postmenopausal women with schizophrenia who were either users or nonusers of hormone replacement therapy. They found that the women taking hormones required a lower dose of antipsychotics and had less severe negative symptoms (6). Variations in the menstrual cycle have also indicated improvement in positive symptom during periods where estrogen levels are higher. Though promising more data is required to say with certainty if there is a definitive indication for estrogen therapy as an adjunctive treatment modality for schizophrenia.

No. 21

Challenges of Treating Children and Adolescents With Gender Dysphoria

Poster Presenter: Azka Bilal, M.D.

SUMMARY:

I describe the case of a 15 year old female with depression and gender dysphoria, who presented to my outpatient clinic, after a recent suicide attempt. She reported symptoms of depression, and revealed that she had been struggling with gender identity and wanted to be a boy. She was having a difficult time gaining the support of the Catholic mother who could not believe how her daughter wanted to be a boy. She had taken the patient to multiple therapists prior to coming to see me, complaining how the "liberal" therapists were supportive her daughter's desire to be a boy rather than focusing on why she did not want to be a girl. Working in collaborating with the mother and treating the patient's depression made this case challenging. This case highlights the challenges encountered by the psychiatrist in treatment of patients with gender dysphoria. The role of a psychiatrist as an advocate for the patient is affected by his/her countertransference that in turn depends on his/her social, political and religious beliefs. Working with the family and their belief systems is another challenge. Moreover, psychiatric comorbidities and suicide risk can further complicate the treatment of the patient. Another important question for a child and adolescent psychiatrist is when is to refer their young patients for hormone or gender reassignment surgery.

No. 22

An Analysis of Juvenile Addiction Receiving Facility (JARF) Evaluations and Utilization of Inpatient Services for Miami Dade County

Poster Presenter: Elizabeth Hoy, M.D., M.S.

SUMMARY:

Co-Authors: Bryan Ellerson MD., Giannina Salas PsyD. Background: Substance abuse, and risky health behaviors among adolescents have become more prevalent in the United States population. Previous data has evaluated Juvenile Assessment Centers in Florida, and provided an overview of the services and procedures. Citrus Health Network (CHN) is the only Juvenile Addiction Receiving Facility (JARF) in Miami-Dade, and provides insight to the complexity of mental health and substance abuse interrelation, diagnosis and treatment in minority youth. Until we obtain better epidemiological data of adolescents being admitted to JARF, we cannot know how best to utilize the system's mental health and substance abuse resources. This study analyzed the JARF evaluations to further understand substance abuse and mental health in South Florida youth, among clinical sample of patients < 19 years old. Methods: A retrospective chart review was conducted on 706 admissions under JARF at CHN Inpatient Child Unit (August 2012 to December 2016). Data including the Global Appraisal of Individual Needs –Quick (GAIN-Q) instrument used for every JARF admission as well as demographic data from medical records were obtained to analyze patient population trends, and evaluate treatment recommendations. Factors affecting readmission were explored through contingency tables and the calculation of odds ratios. Results: Among 594 unique patients, 93

(15.7%) were readmitted to JARF center, and 14 (2.4%) patients had multiple readmissions. Of these patients, 389 (65.5 %) were male, 378 (63.7 %) were between age 16- 19 years, and 304 (60.7%) were Hispanic. Lifestyle data revealed that 584 (98.7 %) adolescents used any substance in the past 90 days. It was noted that 360 (60.6 %) patients have received some mental health treatment in past 90 days. In adjusted analysis, children ages 11-14 were more likely to be readmitted that children ages 16-19 (OR=3.32; 95% CI: 1.88-5.86), and those age 15 are 3.13 times more likely to be readmitted that children ages 16-19 (OR=3.13; 95% CI: 1.79-5.50). The odds of readmission increased for patients who had been arrested in the past 90 days by 66% when adjusted for other variables (OR=1.66; 95% CI: 1.01-2.72). Conclusions: Our results showed that in a predominantly Hispanic sample, the odds of JARF readmission were associated with age and arrest in the past 90 days. Population based data on these behaviors at the state, and local levels under JARF can help to understand the need for health interventions designed to protect and promote the health of South Florida adolescents. The identification of early life risk factors for JARF admission can inform both clinical professionals about children at risk for future admission and recognition that there is a shortage of community resources to address juvenile addiction.

No. 23

Retrospective Review of Prazosin Use in Adolescent Youth

Poster Presenter: Forrestine Dickson Knowles, M.D.

SUMMARY:

Introduction: The juvenile population has higher rates of multiple experienced traumas, and is thus at increased risk of developing Post Traumatic Stress Disorder (PTSD). In the general population, estimates of experienced trauma average 25% (Costello 2002), compared to approximately 90% in incarcerated youth (Abram 2004, Ford 2012). The American Academy of Sleep Medicine has recommended Prazosin as treatment for PTSD related nightmares (Aurora 2010). The most recent VA/DoD guidelines (2017) are equivocal regarding Prazosin's use in this manner. Although frequently used in the adolescent population, the evidence is limited to only a few case reports summarized by Akinsanya (2017), and a recently released retrospective chart review of patients treated in a trauma focused clinic (Keeshin 2017). Methods: After IRB approval, we conducted a retrospective chart review of youth evaluated and treated from June 2015 to June 2017 in a weekly juvenile detention center clinic. Utilizing the local EMR, a total of 167 patients were identified, of which 24 were found to have been treated with Prazosin. We reviewed gender, ethnicity, age at onset of treatment within the clinic, comorbid diagnoses, additional treatments, initial and final treatment dose, response, tolerability, and adverse effects. Results: SPSS was used to analyze data for relevant findings between the above variables. One patient was discharged prior to reassessment, and was thus excluded. The final N=23, 19 of which were found to have an improvement in symptoms (decreased number of nightmares). Overall, an overwhelming majority of patients demonstrated an improvement in symptoms, with mean dose of 2mg. The mean age at onset of treatment was 15 years old (yo) for responders and 16yo for non-responders. Four responders had significant tolerability issues. Of these four patients, 2 experienced symptomatic hypotension, 1 patient had asymptomatic hypotension and 1 experienced excessive sedation, influencing daytime functionality. Of these, only 1 of the patients with symptomatic hypotension elected to discontinue. One non-responder was found to have worsening of nightmares (quantity) and significant hypotension, therefore Prazosin was discontinued. Of note, multiple variables were reviewed to include gender, trauma type (physical, emotional, sexual), diagnoses (PTSD, ADHD, Mood Disorder, Substance Use Disorder), but no statistically significant findings were discovered as predictors of response to Prazosin. Conclusion: Within this limited data set, no statistically significant predictors of response (decreased nightmares) to Prazosin were found. However, given the overwhelming improvement in symptoms, we advocate for routine screening and careful consideration of trauma related diagnoses in high risk youth.

No. 24

Long-Acting Injectable Dopamine Neuromodulator Use in Pediatric Psychiatric Patients

Poster Presenter: Harsimran Kaur
Co-Authors: Astik Joshi, M.D., Shawn E. McNeil, M.D., Lee Stevens, M.D.

SUMMARY:
Background: Oral antipsychotics are the treatment of choice for a number of psychiatric disorders in children and adolescents, including schizophrenia, bipolar disorder. However, LAIs antipsychotics, including fluphenazine decanoate, haloperidol decanoate, risperidone microspheres, paliperidone palmitate, and aripiprazole monohydrate have not been approved for use in youth. Clinical applicability of LAI antipsychotics remains a global cause of concern. We undertook a review of the available literature to determine what the current state of knowledge for the use of LAIs in children and adolescents. Methods: Databases such as Pub med, CINAHL, Medline were searched for articles in English (2010-2017) using key words: long-acting injectable, antipsychotic, pediatric, bipolar, schizophrenia, psychosis. All research papers, review articles and articles published during the mentioned time were read and examined. Results: The search identified a number of case reports and series between 2010 and 2017; here we include two case series, one open-label trial, and one case report on LAI use in children and adolescents. Sample sizes with a total of 31 individuals were included in the reports. The age range was 11-17.These studies reported on a variety of conditions, including bipolar spectrum disorder, schizophrenia spectrum disorders, mood disorder NOS, and schizoaffective disorder, for which LAIs were adequate. LAIs antipsychotic use was recommended in patients with the following characteristics: multiple episodes and low adherence; serious episodes and multiple oral antipsychotic users still experiencing the symptom. Side effects, including weight gain, extra pyramidal symptoms, increased appetite and galactorrhea with LAIs appear similar to reports of side effects with oral drugs in young people with psychiatric conditions. Conclusion: The case reports and series reviewed highlight the efficacy and safety of LAIs for the treatment of serious mental illnesses like schizophrenia, bipolar spectrum disorder and schizoaffective disorder in children and adolescence. LAIs were effective in preventing non-adherence and in reducing relapse.

No. 25
Anxious School Refusal/Phobia: An Understudied Field
Poster Presenter: Jack Chengjie Wang, D.O.

SUMMARY:
Problem Statement: Anxious school refusal/phobia affects 2-10% of school-aged children each year. It can generate debilitating functional and psychiatric impairment. It usually suggests significant psychiatric comorbidities, and adverse experience at home and school. Psychiatric management is usually pragmatic. For evidence-based guideline, further research is required for this understudied field. Purpose: The purpose of this study is to illustrate two inpatient adolescent cases with debilitating school phobia, and to summarize literature review on child/adolescent school refusal/phobia. Methods: Two cases from child/adolescent inpatient unit are analyzed. Symptomatology and treatment strategies are compared with similar case reports and literature review findings. Literatures are searched using common web and scholar database queries, with both general and specific descriptors. Findings are synthesized in table and concept map format. Results: Two adolescents experienced similar hospital course with satisfactory initial response to integrated pharmaco-psycho-social intervention. Both adolescents felt reassured with their recommended flexible learning formats (home bound instruction or homeschooling). Literature review yield is moderate, with small scholarly studies and no landmark/classic article. Most treatment strategies are cognitive behavioral therapy based. Most studies failed to discuss home bound/homeschooling as a treatment strategy and one considered it as contraindicated. Conclusions: Anxious school refusal/phobia can generate severe functional and psychiatric impairment. It can have a bi-directional cause-effect relationship with comorbid psychiatric disorder, mostly depression and anxiety. It often suggests insidious psychosocial trouble at home or school. Its treatment strategies are mostly pragmatic. Home bound/homeschooling as effective intervention needs validation. Overall this field is understudied.

No. 26

Delayed Onset of Serotonin Syndrome in a 16-Year-Old Female After Intentional Sertraline Overdose

Poster Presenter: Jared Mendelsohn, M.D.
Co-Authors: Gabrielle Hodgins, Judith Regan

SUMMARY:

Background: Serotonin Syndrome (SS) is a potentially life threatening complication caused by increased serotonergic activity in the central and peripheral nervous systems. It is caused by excess stimulation of post-synaptic serotonin receptors and is characterized by the clinical triad of mental status changes, neuromuscular abnormalities, and autonomic hyperactivity. Over the past two decades, there has been an exponential increase in the use of psychotropic medications in the adult and pediatric populations. Much of this increase is owed to the popularity of Selective Serotonin Reuptake Inhibitors (SSRIs) and Serotonin Norepinephrine Reuptake Inhibitors (SNRIs) due to their broad range of clinical indications, relative tolerability, safety profiles, and wide therapeutic indexes. However, as the frequency of prescribing SSRIs to children and adolescents continues to increase, providers must be aware that these medications can cause serotonin syndrome, even as a single agent. Serum serotonin levels have not been shown to correlate with serotonin syndrome and the history and clinical presentation are used to make the diagnosis. Case: Here we present a novel case of serotonin syndrome in a 16-year-old female who intentionally overdosed on Sertraline in a suicide attempt. She was medically cleared at an outside hospital and transferred overnight to our child and adolescent psychiatry unit. The patient demonstrated a remarkably delayed onset of symptoms and only first began to exhibit jitteriness, tachycardia, and mild mental status changes the following morning at approximately 18 hours after ingestion. She was transferred to the pediatric medical unit where she subsequently developed visual hallucinations, disorganized thought process, severe agitation with physical aggression, increased tachycardia, mild elevation in CPK, hyperreflexia in the lower extremities, and inducible clonus. She was treated with IV fluids, Ativan 12mg IV in split doses during her first 24 hours on the pediatric medical unit, and Ativan 12mg IV in split doses over the next 24 hours on the pediatric unit. The patient's symptoms resolved on the fourth day after overdose and she was transferred back to the psychiatric unit where no further symptoms were observed. Discussion: This case adds to the literature of serotonin syndrome caused by overdose of an SSRI as a single agent in the child and adolescent population. Moreover, it suggests the possibility of a delayed onset of clinical symptoms of serotonin syndrome and the need to observe or monitor patients for 24-48 hours after an SSRI overdose.

No. 27

Schizotypal Personality Disorder in Two Children on an Acute Inpatient Psychiatric Unit: Potential Risks, Manifestations, and Concerns

Poster Presenter: Javier Reyes, M.D.
Co-Authors: Judith Regan, Samantha B. Saltz, M.D.

SUMMARY:

Diagnoses of conduct disorder, antisocial personality disorder, and comorbid substance use with access to firearms have been frequently linked to adolescent perpetrators of mass school shootings in North America. Less frequently, Schizotypal personality disorder has been mentioned as a risk factor. Individuals with schizotypal personality disorder are described as strikingly odd and commonly exhibit magical thinking, peculiar speech, disturbed thinking, interpersonal difficulties and social isolation. A 2004 study showed that ''odd, reclusive and dramatic acting-out patterns of behavior" were suggested in a majority of adolescents who became mass murderers (Meloy et al., 2004).We believe that further investigation is needed to explore the association of schizotypal personality and mass homicide by adolescents. Methods: We present two adolescents hospitalized in an acute inpatient child and adolescent psychiatric unit with homicidal ideation. Results: Case 1 : A 14-year-old male was admitted to an acute inpatient psychiatric unit after suggesting to classmates that he was considering shooting other children at school. He told classmates to wear white in order to avoid being shot. He also threatened that he would commit suicide on social media. Projective data suggested that the patient was experiencing disorganized thinking often grounded in fantasy rather than reality. He displayed odd thought patterns and a preoccupation with horror films and fantasy. He exhibited a rigid style of

thinking regarding emotions and relationships and was found to be impulsive. Case 2: A 16-year-old male was admitted to an acute inpatient psychiatric unit after telling his father that “he was going to make Columbine look like a joke.” He admitted to watching documentaries about the Columbine school shooting and posting a note on a school website stating that he would “shoot up the school” and then kill himself. MACI was administered showing a low Desirability Scale Score (BR=35) and a Debasement Scale Score (BR=72) indicating a tendency to devalue himself. He received elevated scores on Introversive (BR= 83), Doleful (BR= 77), Inhibited (BR=74), Submissive (BR =74), and Self-Demeaning (BR= 72) scales. Projective drawings suggested insecurity and rigidity patterns with a severe sense of inadequacy, helplessness, and seeing the world as unkind. The Rorschach Inkblot test showed a propensity to lose contact with and distort reality when under perceived immense stress. Conclusions: We present two adolescents admitted to an inpatient psychiatric unit after making mass homicidal threats towards classmates followed by suicidal ideation. Both were diagnosed with schizotypal personality disorder. While other personality traits and risk factors have been more commonly linked to mass school shootings, we intend to further explore the potential risk for this behavior and possible interventions in children diagnosed with schizotypal personality disorder.

No. 28

Child Abandonment in the Psychiatric Emergency Department

Poster Presenter: Jessica Ee, M.D.
Co-Authors: Maura Hanna, Robert L. Weisman, D.O.

SUMMARY:
New York State law classifies a child as abandoned if the guardian “forego[es] his or her parental rights and obligations as manifested by his or her failure to visit the child and communicate with the child although able to do so.” Resident physicians within a university psychiatric emergency department have noticed a significant increase in child abandonment cases involving children with developmental disabilities or autism spectrum disorders. Although several of these children were connected to multiple community and government services, their complex needs failed to be met, prompting emergency department presentations for chronic behavioral issues. Behaviors not improved, and typically worsened, during inpatient admissions. Though cleared for discharge, these individuals are left for days in an acute emergency department setting without a legal status to retain them, yet lack the capacity to leave. These children require intensive staff support at an expense greater than the average $1300/emergency department visit covered by insurance. The cases are reported to Child Protective Services, but this leverages little support or incentive for families to bring their children home. This case report describes one patient abandoned in the psychiatric emergency department repeatedly and illustrates several of the legal, community and systems based issues confronting families, patients and emergency department services as well as highlights changes that need to be made in future to care for children with developmental disorders.

No. 29

Treatment Challenges and Risks of Polypharmacy Among Adolescent With Mental Disorder in Juvenile System: A Case Report

Poster Presenter: Jin Cai, D.O.
Co-Author: Garima Singh, M.D.

SUMMARY:
Abstract This is a case of a 17 year old male with a diagnosis of Autism Spectrum Disorder, Psychosis Disorder Unspecified, Intermittent Explosive disorder, and Intellectual Disability who was in juvenile system and seen through telehealth. At the initial visit, patient was prescribed three antipsychotics, one mood stabilizer, and a medication for insomnia: 3 mg Risperidone BID, Chlorpromazine 50mg BID, Quetiapine 100mg QHS, Depakote 500mg TID, and Trazodone 50mg QHS. Patient presented somnolent on these medications and was unable to complete his daily activities. Due to the concerns for the safety, long term side effects, risk of polypharmacy (i.e. three antipsychotics) and the fact that the patient was having issues completing daily activities due to somnolence was planned to taper down to two antipsychotics. When the patient was tapered down on Quetiapine, started to have increased auditory hallucinations the patient was sent to inpatient facility for further

evaluation and stabilization. Risperdal was tapered off while increasing in Divalproex Sodium, Chlorpromazine, and Quetiapine. Also, the patient was cross tapered off trazadone and started on Prazosin and Citalopram. Patient tolerated the change well and showed improvement in cognitive state throughout hospitalization. The patient was discharge back to the juvenile system with much improvement in behavior, minimized auditory hallucinations, and day time somnolence. Patient was stabilized on Divalproex Sodium 475mg TID, Chlorpromazine 25mg BID & Chlorpromazine 100mg QHS, Quetiapine 300mg BID, Citalopram 15mg Daily, and Prazosin 2mg QHS. The problems encountered in this case include psychosis, unstable living situation, Autism Spectrum Disorder, and aggressive behavioral concerns. In conclusion, there continues to be a minimal amount of literature about the prescription drug use and the rates of polypharmacy in the treatment of children/adolescent in the Juvenile system. Few studies have shown that adolescents in the juvenile system are at higher risk for polypharmacy, up to ~50%. Clinician needs to be more aware when treating those in the juvenile system because these patients usually require lifelong treatment and are at higher risk of extrapyramidal symptoms, akathisia, sedation, weight gain, and/or metabolic syndrome due to polypharmacy. Prescribers and caregivers should be encouraged to weigh the benefits and risks associated with pharmacological treatment. Case management should include good coordination of care with primary care provider, therapist, and social services for the efficacious and successful management of the adolescent patient.

No. 30

Parenting Style and Mental Disorders in a Nationally Representative Sample of U.S. Adolescents

Poster Presenter: John Eun

SUMMARY:

Purpose: We examined associations between parenting style and past-year mental disorders in a nationally representative sample of U.S. adolescents and whether the associations differed by adolescent demographic characteristics. Methods: The sample included 6,483 adolescents aged 13 to 18 years who were interviewed for a full range of DSM-IV mental disorders. Parenting style was assessed by adolescent-reported maternal and paternal care and control using items from the Parental Bonding Instrument. We controlled for socio-demographics, parental history of mental disorders, stressful life events, sexual violence, inter-parental conflict, and household composition. We also tested for two-way interactions between parental care and control and adolescent age, sex, and race/ethnicity. Results: In adjusted models, high maternal care was associated with lower odds of depressive, eating, and behavioral disorders, and high maternal control was associated with greater odds of depressive, anxiety, eating, and behavioral disorders. High paternal care was associated with lower odds of social phobia and alcohol abuse/dependence. High paternal control was associated with greater odds of agoraphobia and alcohol abuse/dependence but with lower odds of attention-deficit/hyperactivity disorder. Associations of maternal and paternal control with anxiety disorders and substance abuse/dependence differed by sex. High paternal care was associated with lower odds of anxiety disorders only among Hispanics and non-Hispanic blacks. Conclusions: Parental care and control were associated with adolescent mental disorders after controlling for multiple potential confounders. Differential patterns of association were found according to adolescent sex and race/ethnicity. Findings have implications for prevention and intervention programs that incorporate familial contextual factors.

No. 31

The Trend Toward the Prescription Drug Misuse: A Case of Xanax Addiction in Child

Poster Presenter: Ketan A. Hirapara, M.B.B.S.
Co-Authors: Bimla Rai, M.D., Rashi Aggarwal, M.D.

SUMMARY:

Introduction: Knowing the fact that their own child has been misusing prescribed drugs is always devastating for any parents. Sedatives including Xanax (Alprazolam) are widely used for treatment of insomnia and anxiety by physicians but they have high misuse and abuse potential. This not only concern for addiction or misuse potential in adults but also in children. According to Forbes, estimated 50 million prescriptions of Xanax was prescribed in

2013. Xanax is the number one prescribed psychiatric medication in the United States. According to SAMSHA, in 2015 an estimated 1.5 million (6.6%) children aged 12-17 misused Xanax of total 1.6% who misused tranquilizers. According to National Institute on Drug Abuse, 1.70% 8th graders, 4.10% 9th graders and 4.90% 10th graders misused tranquilizers including Xanax. Survey by teen treatment Center showed that 9% of highschool children in the US reported abusing Xanax at some point in their life. There hasn't been any case reported despite increasing incidence of Xanax misuse or abuse. Case Report: A 11 year old girl was referred to emergency room for her school for an evaluation for drowsiness. While individual interview with patient, patient reported that past few weeks she has been using Xanax on and off. She was getting Xanax pills from her friend who was getting it from his mom's medicine cabinet. Friend himself was misusing it. When asked about the reason, she reports that she was stressed out, resulting in first time use when offered by her friend. First experience of high feeling lead patient to get more Xanax from friend. On the day of ED visit, she reported one pill resulting in no high effects so she use one after another 3 more doses and she became drowsy. When informed parents about her Xanax use, they were shocked as reported being aware of whole scenario. Discussion: Despite, well known fact of prescribed Xanax misuse in children, very few has been published about it. Not just awareness among parents to identify Xanax abuse symptoms in their children such as mood swings, neglecting school and other responsibilities, extreme tiredness, changes in friends, stealing money from family and friends, suspicious behavior but also risk stratification by prescribing physicians by discussing associate misuse in kids while prescribing are important elements and they have never been addressed so far, justifying further awareness to optimize alternative treatment, patient risk assessment, establishing a treatment plan and limiting dose & early refills. More concerning is subtle effects on motor skills, cognition, memory as children's' brain are not fully developed. Data showed that 53.7% of children get the drug from family & relatives, 34% get from doctor or stole from health care providers. As a parent if suspected avoid false sense of security and "TALK TO YOUR CHILD."

No. 32

Stirring the Melting Pot: Introduction of Practice-Based Module to the Cultural Competency Training for Psychiatry Residents

Poster Presenter: Alaa Elnajjar, M.B.B.Ch.
Co-Authors: Hameed Azeb Shahul, M.B.B.S., Alexander C. L. Lerman, M.D.

SUMMARY:

The role of culture in the assessment and care of psychiatric patients has been written about at length, is often emphasized in principle, and yet overlooked in clinical practice. Considerable evidence supports the idea that sociocultural differences between patients and physicians can influence communication and clinical decision-making. A literature review suggests that, residency training to deliver effective care to people of various sociocultural backgrounds lags behind other clinical/technical areas. Studies on implementation and resident preparedness indicate that much of the experience acquired by resident's stem from the understanding/skills they develop on their own from clinical experience, as opposed to be the result of formal training. In a National survey of 2047 resident, 96% agreed upon the significance of addressing the cultural dimension of health care. A large percentage indicated that they were not well prepared to care for patients with health beliefs at odds with Western medicine (25%). We plan to explore the significance of practice-based learning as part of the cultural competency curriculum. Videotaped culturally challenging scenarios of standardized patients will be created. The residents in the program will be asked to build a cultural formulation after the interview. These videos are designed to improve the trainee's ability to carry out a culturally competent interview, with special focus on the components of resident preparedness – namely, knowledge acquisition, skills training and development of the right attitude. These videos will also touch upon various elements of a profound culturally relevant clinical evaluation, such as the implications of linguistic barrier, patient's perception of illness, his/her reaction and adjustment to illness, body language and demeanor, motivation for treatment/compliance, and other perceived idiosyncrasies during an interview. It will also

explore the physician's potential biases during an evaluation of someone from a different culture. Assessment of the learning experience will be done through a special rating scale tool, which is designed to evaluate the interviewer's cultural competency; his/her capacity to be empathic and establish rapport; the use of advanced interview techniques such as confrontation and formula-driven interviewing, and the awareness of one's own emotional response or countertransference.

No. 33

Characteristics of Patients With Frequent Readmission to Child and Adolescent Inpatient Units: Predictors for Better Quality of Care

Poster Presenter: Alaa Elnajjar, M.B.B.Ch.
Co-Authors: Ifeoluwa Osewa, M.D., M.P.H., Shanila Taha, Steven G. Dickstein, M.D.

SUMMARY:
Readmission is defined as patients being readmitted to any psychiatric inpatient setting within 30 days of discharge from an inpatient psychiatric setting. Previous studies showed Child and Adolescent re-hospitalization rates range between 19%-28% within six months (Arnold et al., 2003), 38% within one year (Fontanella, 2008), and 43% within 2.5 years after discharge (James et al., 2010). At Westchester Medical Center (WMC), a tertiary care academic hospital in Westchester, New York, readmission rate for child and adolescent units over an 18-month period (Jan. 2016- June 2017) was 31.8%. Literature reviews have identified various characteristics that are more common among people who utilize heavier use of inpatient psychiatric services. In our clinical practice, we have observed several factors possibly contributing to readmissions, including: medication adherence, patient/caregiver education, transitional care planning, discharge disposition, and recurrent suicidal/self-injurious behavior. This study was designed to determine and quantify these factors, which will allow the identification of targeted approaches to reduce frequent readmissions. The research is phase one of a quality improvement project, performed by the Behavioral Health Readmission Reduction Committee at WMC, in collaboration with the Westchester County Office of Mental Health (OMH).Methodology: The study is an observational chart review at WMC. Data were retrospectively reviewed from January 2016 to June 2017. A total of 106 cases who had re-hospitalizations within 30 days of their last discharges were eligible for the study. A set of clinically relevant predictors was generated based on a literature review. Data Abstraction: The selection of target population and data was extracted from: The electronic medical records of WMC and Behavioral Health Center (BHC), Clinical Record Interactive Search (CRIS), Net Access, and PSYCHES for Medicaid patients. Variables were identified utilizing the emergency department review of charts and post-discharge services. These variables include but are not limited to socio-demographic factors, medication upon admission and discharge, prior hospitalization, length of stay, diagnosis, substance abuse, history of suicidal attempts, history of violence, living situation, post-discharge communication, and insurance status. It is hoped that by analyzing the available data, specific variables will be identified to allow clinicians to predict which patients are at higher risk for readmission. In phase two, we will address the provider and system factors and design interventions to evaluate and improve readmission rates. Results: Currently pending Institutional Review Board (IRB) review, data will be ready by the time of the poster presentation.

No. 34

Current Trends in Cognitive Enhancement Therapies of Schizophrenia

Poster Presenter: Jaskirat Singh Sidhu, M.D.
Co-Authors: Fei Cao, M.D., Ph.D., Javeria Sahib Din, Ambika Kattula, M.B.B.S.

SUMMARY:
Background: Schizophrenia is characterized by broad cognitive decline, including impairments in memory, attention, executive functioning, vocabulary, visuospatial skills and learning. Unfortunately, all antipsychotics available at present provide little help in cognitive impairment associated with Schizophrenia (CIAS). As a result, new treatments are needed to better control CIAS. Briefly, current strategies targeting cognitive deficits broadly consist of pharmacologic agents and cognitive re-training. Pharmacologic agents: TC-5619 (?7 nAChR Agonist), had effectively improved executive functions and

negative symptoms in the clinical trials; both Tandospirone (5HT-1A rec agonist) (given alone or in combination with antipsychotic blonanserin) and Positive allosteric modulators (M4 mAChR agonists) had demonstrated efficacy in treating cognitive deficits in the animal models; Modafinil also improved cognition in sleep-deprived patients in the clinical trials; Inhibition of phosphodiesterase 10A (PDE10A) activates dopamine D1, and were currently under study to improve cognition in Schizophrenia; Estrogen based therapies were also beneficial. Non-pharmacologic therapies/CET: Verbal learning had proven benefits in restoring cognition; Targeted cognitive training of auditory processing was associated with better executive functions but not verbal memory; Aerobic exercise induced increased neuroplasticity improved the functioning and cognition; Cognitive remediation and concurrent psychosocial therapies had been noted to help improve functioning and cognition in schizophrenics; Cognitive enhancement therapies had also shown to increase the neural activity in the brain confirmed by MRI studies and had been effective in improving negative symptoms and executive function; Increased social interaction of the patients in the group homes had enhanced effectiveness of cognitive enhancement therapy (CET); Transcranial stimulation was another common option but more evidence is required to prove its efficacy. Method: The objective of this review is to highlight current trends in targeting CIAS. Journal articles from PubMed and Cochrane from the past five years regarding advancements to improve cognition in schizophrenic patients are systematically analyzed. All these new interventions will be discussed in terms of their efficacy. Conclusion: The pathophysiology of all domains of Schizophrenia is divergent. As a result, the exact causes and etiologies of cognitive decline in schizophrenia is still an area of intensive research. Pharmacological and non-pharmacological methods targeting specific connections among these different domains can be interesting and unexplored starting points.

No. 35

Residency Characteristics That Matter Most to Psychiatry Residents: A Multi-Institutional Canadian Survey

Poster Presenter: Jennifer Wong, M.D.

SUMMARY:

Background Residency is a critical period for the psychiatric trainee. It is important for residency teaching programs to understand what characteristics influence the prospective resident to further advance residency education. The richness of the residency experience is often tied to resident satisfaction. Resident satisfaction is not only an indicator of the quality of clinical education but frequently impacts a resident's overall wellbeing. Objective: To investigate what factors correlate with a psychiatric resident's satisfaction in determining a successful residency experience. Methods: An online, anonymous cross-sectional survey was developed and sent to all psychiatry residents in Canada, approximately 750 residents, through the Coordinators of Psychiatric Education (COPE) at each program to be distributed at their discretion. Survey responses were linked to their respective institutions (N=6). The survey included resident and residency demographics, as well as subcategories focusing on research, education, call duty, teaching opportunities, faculty, and residency culture. Satisfaction of the residency program was rated on a 7-point Likert scale. Statistical significance was determined using multiple response analysis in SPSS. Results: One hundred and forty two psychiatry residents responded to the survey. Overall, 83.8% (118/142) residents reported being 'very satisfied' (57.0%) or 'moderately satisfied' (26.8%) with their program. In comparison, 4.2% reported they were 'moderately dissatisfied'; 10.6% reported being 'slightly dissatisfied', 'slightly satisfied' or 'neutral'. Conclusion: Our study adds to the existing body of literature offering insight into factors that contribute to the quality of psychiatry residency programs.

No. 36

See One, Do One, Document One: Improving Resident Physician Clinical Documentation Skills Through Education and Example

Poster Presenter: Lauren Marie Pengrin, D.O.

SUMMARY:

Clinical documentation is an essential component of patient care, especially in psychiatry. Psychiatrists, more so that many other specialties, rely on medical records to capture the nuances of patient

interactions. It is one of the key ways in which we communicate our findings and intentions with other health care professionals. Resident physicians are responsible for a large percentage of the documentation in hospitals across the country. This presentation will discuss the importance of proper education for psychiatric resident physicians in the art and science of utilizing electronic medical records to provide the best patient care and outcomes. It will outline current documentation curricula and expected competencies as defined by the ACGME. Additionally, this presentation will propose improved curricula and education modules designed to more fully prepare psychiatric resident physicians for the rigors of documentation in the electronic medical record era. The aim of these revamped modules is to ensure accurate and thorough charting and billing, while avoiding the potential pitfalls of "check list" documentation. Finally, this presentation will also explore the role of supervising and teaching physicians in resident education and suggest ways to best impart the necessity of precise documentation through example.

No. 37

An Evaluation of Empathy Within a Psychiatry Residency Training Program

Poster Presenter: Luciana Giambarberi, M.D.
Co-Author: James N. Kimball, M.D.

SUMMARY:

Background: Despite evidence for the centrality of doctor–patient relationships in effective psychiatric treatment, the current research paradigm of psychiatry has paid limited attention to the role of empathetic human understanding in routine psychiatric treatment. Psychiatry has faced significant criticism for excessive dependence upon the Diagnostic and Statistical Manual of Mental Disorders (DSM) and medications while disregarding empathetic, humanistic interventions. Helping those with mental illness involves the use of empathetic skills throughout practice. However, there is little discourse on how empathy can be effectively incorporated into daily practice. The Helpful Responses Questionnaire (HRQ) is designed to measure the development of reflective listening and empathy skills. These skills are central to the implementation of motivational interviewing in mental health, addiction and social service settings. The HRQ has also shown promise in the clinical years of medical training. This instrument demonstrates strong potential for use as a tool that measures effectiveness of motivational interviewing in a longitudinal curriculum, addressing client and patient behavior change across multiple healthcare settings. While other validated empathy questionnaires exist, the HRQ is unique in that the respondent is required to provide free form answers, as opposed to answering on a Likert scale. There are limited studies using the HRQ, particularly in psychiatry residents. This study is designed to evaluate empathy in psychiatry residents at an academic medical center in the Southern United States. One hypothesis is that empathy is dependent on level of training. **Methods:** Psychiatry residents and fellows at Wake Forest Baptist Medical Center were surveyed via email. They were provided with the HRQ and explanation that their responses could lead potential future research projects. Scores were assessed using a 5-point ordinal scale of depth of reflection (5 being the highest empathy rating, 1 being the lowest) and cross-referencing "Thomas Gordon's Twelve Roadblocks." **Results:** 24 out of 32 residents responded. A brief summary is shown below: PGY-1 PGY-2 PGY-3 PGY-4 PGY-5 Avg. HRQ Scores: 1.5 1.7 1.6 1.9 3.9 **Conclusion:** There is a correlation between higher HRQ empathy scores and increasing years of training. However, overall, especially within the first 4 years of training, scores are low. PGY-5 fellows had notably increased empathy scores. Continued research and analysis is warranted in order to further elucidate significance among training levels. Subsequent stages of this research will include: expansion of the HRQ survey to include all psychiatry residents in the U.S., empathy training at Wake Forest to assess for potential improvements in empathy scores and surveying residents in all departments at Wake Forest to assess for variations among specialties.

No. 38

Teaching Neurobiology in Psychiatry

Poster Presenter: Lujain Alhajji, M.D.

SUMMARY:

The relationship between psychiatry and neuroscience has constantly evolved since the

conception of our field. The past two decades have witnessed a steep rise in research related to neurobiology in psychiatry. Advances in neuroscience have led psychiatry residency programs to steer towards a neuroscience based approach instead of the traditional focus. Despite increased interest and advances in neuroscience and psychiatry, residency programs are not required to integrate neurobiology in psychiatry. There are several difficulties residency programs face when attempting to teach this subject area, including the availability of knowledgeable faculty, knowing what to teach, and how to deliver the information. Psychiatrists across all levels of training are enthusiastic about learning neuroscience. With the current advances in biological psychiatry, neurobiology needs to be integrated into the training and teaching of psychiatry residents. The approach of integration has to be transdiagnostic, clinically relevant and applicable to both trainees and psychiatry educators. We will discuss the importance of teaching neurobiology in psychiatry residency programs, outline specific areas we recommend teaching, and propose teaching strategies that may enhance learning by psychiatry residents. The neurobiology topics we recommend for psychiatry programs to teach their residents include: neuroscience literacy, neuroanatomy, neuroimaging, neuropathology, neural circuits and neurotransmitters, neuroendocrinology, psychoneuroimmunology, neurophysiology, genetics and epigenetics, and neuropsychological testing. There are different strategies to teach residents that enhance adult learning, which include formal discussions, clinical case presentations, journal clubs, specialized neuroscience rotations, neuroanatomy modules, grand rounds and classes discussing topics at the interface of neuroscience and psychiatry in the media.

No. 39

Suicide Conduct Among Students: The Biggest Challenge in College

Poster Presenter: María Morel
Co-Author: Moises Zouain

SUMMARY:

Background: Mental illnesses, mainly depression and alcohol consumption disorder, substance abuse, violence, feelings of loss and diverse cultural and social environments are important risk factors of suicide. This study determined the prevalence and factors associated with suicidal behavior in university students. **Methods:** A cross - sectional descriptive study of primary source was carried out, where the population investigated were 412 undergraduate students of the Pontificia Universidad Católica Madre y Maestra (PUCMM), Santiago, Dominican Republic, during the second trimester of the 2016–2017 academic year. The questionnaire consisted of 59 questions, conducted by the researchers. The data collection instrument includes the Beck Despair Scale, the Plutchik Suicide Risk Scale and the Family Apgar, as well as questions about sex, academic career, alcohol and tobacco use, sexual abuse, sexual preferences, among others. **Results:** Plutchik's suicide scale revealed that 22% (IC95%=17.9%–25.8%) of the participants was at high risk of committing suicide. At the same time, Beck's scale of hopelessness showed that 26% (IC95%=21.7% - 30.2%) of the students had suicide conduct. There was a statistically significant relationship between the college career, sexual identity, career change and family dysfunctionality with suicidal behavior according to the Beck Despair Scale. **Conclusion:** There is a high prevalence of suicidal behavior in university students. Sexual identity, visits to the counseling department and different reasons, and family dysfunction are related to suicidal thoughts or behavior. **Keywords:** Suicide, Collegue Students, Suicidal Behavior, Psychiatric Disorders

No. 40

Using I-PASS in Psychiatry Transitions of Care

Poster Presenter: Michael Reid Bowes, D.O.
Co-Author: Landon S. Frost

SUMMARY:

Limitations placed on resident duty hours in recent years were instituted primarily to improve patient safety; however this has also inadvertently created a new opportunity for adverse outcomes through an increased number of handoffs. I-PASS (illness severity, patient summary, action list, situational awareness with contingency planning, and synthesis by the receiver) is a handoff system that has been used in multiple specialties with significant success.

There is very little research about handoff tools in the psychiatric field specifically, and this article describes how our medical center has instituted this new protocol with a lot of success in three diverse psychiatric settings. In this article we discuss the format of I-PASS, and how it can be incorporated into a residency program to help fulfill residency requirements as well as provide a superior education for future psychiatrists.

No. 41

The Effect of Administering a Boundary Course to Third Year Medical Students During Their Psychiatry Clerkship

Poster Presenter: Michael Hidalgo
Co-Authors: Sindhura Kunaparaju, M.D., Karim W. Ghobrial-Sedky, M.D., M.Sc.

SUMMARY:
Due to their lack of experience, third year medical students (MS3) are most vulnerable to boundary violations. Investigators aimed to increase awareness regarding boundary issues among MS3s and to assess the effect of videotaped scenarios followed by case based discussion on medical students' comfort in managing boundary issues with patients.A nine question pre-course survey was administered to all MS3s enrolled at Cooper Medical School of Rowan University that asked students to rate their comfort in managing various boundary challenges. MS3s viewed seven pre-recorded simulated boundary-related cases followed by a 10-15 minute discussion of each case that was facilitated by the clerkship director. A post-course survey included three additional questions to the pre-course nine questions to assess students' satisfaction with the course. Pre- and post-course scores were analyzed using Paired t-Tests and effect sizes (ES) were reported. There was a statistically significant difference between the pre-and post-course scores for seven of the nine survey questions, with large ESs (above 0.8) observed for those questions. There was no statistical difference in offering handshakes or giving money to patients. Overall, these findings indicate that students were more comfortable managing the selected boundary issues following the course. In addition, the course was perceived favorably by MS3s. Medical students perceived the course to be beneficial and reported that it increased their awareness to boundary related issues. A boundary course at the beginning of the Psychiatry clerkship improves MS3s comfort in managing boundary challenges with better focus on safety, confidentiality, and building a therapeutic alliance with their patients.

No. 42

Psychiatric Manifestations of Arnold Chiari Malformation

Poster Presenter: Hector Cardiel Sam, M.D.
Lead Author: Aamani Chava, M.D.
Co-Authors: Asghar Hossain, M.D., Javeria Sahib Din, Zohaib Majid

SUMMARY:
The purpose of this case presentation is to illuminate a link between Arnold Chiari malformation, its treatment and psychiatric sequelae. We relay the case of CK a child who was born with Arnold Chiari malformation who recently underwent surgical treatment, after which she began to display behavioral disturbances most consistent with bipolar one disorder. We seek to establish the link between Arnold Chiari malformation and psychiatric manifestations along with the residual effects of surgery. Through a literature review we conclude that there is indeed a link between ACM and psychiatric illness that must be studied further.

No. 43

Factitious Disorder in Medical Professionals

Poster Presenter: Hector Cardiel Sam, M.D.
Lead Author: Sheema Imran, M.D.
Co-Authors: Asghar Hossain, M.D., Javeria Sahib Din, Zohaib Majid, Muhammad Navaid Iqbal, M.D.

SUMMARY:
This case report seeks to examine the nature of factitious disorder in medical professionals and subsequent comorbidity. We relay the case of GA a former internal medicine resident who lost his career do to self prescribing medication for an undiagnosed case of ADHD and later began to experience insidious neurological symptoms which after multiple costly medical work ups did not yield a definitive diagnosis. Through literature review we elucidate the most common presentations of factitious disorder and the most common

comorbidities amongst those in and near the medical profession.

No. 44

Personality Disorders and Early-Life Trauma

Poster Presenter: Hector Cardiel Sam, M.D.

Co-Authors: Asghar Hossain, M.D., Aamani Chava, M.D., Naveed Butt

SUMMARY:

Personality of a specific individual can be defined as a set of individual differences that is, long term tendencies to think, feel, and act in a particular way. In the following case series we explore the genetic, neonatal, and environmental factors in early life that lead to the development of personality disorders. We explore the cases of several patients who suffered neonatal insults and early childhood trauma who later developed personality disorders. Through literature review we seek to establish potential causes of the development of personality disorder and seek to formulate further research directions to explore the development of personality disorders.

No. 45

Early Life Insults and Later-Life Psychiatric Manifestations

Poster Presenter: Hector Cardiel Sam, M.D.

Co-Authors: Asghar Hossain, M.D., Aamani Chava, M.D., Naveed Butt

SUMMARY:

In this case study we seek to establish the link between neonatal insults/early childhood insults and the development of psychiatric illness later on in life. We relay the case of a child DO who suffered multiple developmental insults in her childhood. In the neonatal period she suffered through persistent substance abuse. In her childhood she suffered through neglect and multiple traumatic experiences with DYFUS removing her from her birth mother twice. In her adolescence she has received a diagnosis of ODD and has multiple inpatient psychiatric admissions do to aggressive and assaultive behavior towards her mother. Through literature review we conclude that early life insults lead to a variety of psychiatric manifestations later in life.

No. 46

Pseudocyesis Versus Delusional Pregnancy: The Gendering of Psychosis

Poster Presenter: Hector Cardiel Sam, M.D.

Lead Author: Sheema Imran, M.D.

Co-Authors: Asghar Hossain, M.D., Javeria Sahib Din, Muhammad Navaid Iqbal, M.D., Nirali Dave

SUMMARY:

This case report seeks to establish the causes of pseudocyesis in the context of socioeconomic stressors and maternal loss. We relay the case of ML, a 25 YO F with a significant past psychiatric history who five months prior delivered and lost custody of him. Since that time the patient has been insistent that she is pregnant despite multiple negative HCG tests. The patient continues to claim she is lactating and that she is still 'showing'. Through extensive literature review we also seek uncover gender biases and cultural norms that skew psychiatric delusions towards the feminine. We establish a causal link between maternal loss and pseudocyesis.

No. 47

Can Pharmacogenetic Testing Lead to a False Sense of Security in Clinical Decision-Making? A Case of Nortriptyline-Induced Brugada Syndrome

Poster Presenter: Aaron Wolfgang, M.D.

Co-Authors: Sean Lowell Wilkes, M.D., M.Sc., Iqbal Ahmed, M.D.

SUMMARY:

Introduction: The landscape of psychiatry has taken an important step forward towards personalized medicine with the advent of pharmacogenetic testing. Although pharmacogenetic testing for CYP450 enzymes has been FDA-approved since 2004, its utility in clinical practice and in improving patient outcomes continues to be debated. Though pharmacogenetic testing may bring added value in guiding clinical decisions, it also brings the added potential for unforeseen pitfalls that may ultimately lead to patient harm. Case: "Jane" is a 17-year-old female with a history of treatment-refractory major depressive disorder and chronic migraines. Due to being found that she was an ultrarapid metabolizer of 2D6 on pharmacogenetic testing, her nortriptyline – a major 2D6 substrate – was increased from 75 mg

daily (serum concentration of 53 ng/mL) up to a total daily dose of 225 mg, titrated to a therapeutic level of 101 ng/mL. Over the next 6 months, Jane was also started on bupropion XL 150 mg daily – a strong 2D6 inhibitor – amongst a number of other non-contributory medications. Her bupropion was later increased to 300 mg daily. There was no further therapeutic drug monitoring of her nortriptyline levels as these additional medications had been added to her regimen. One week after the increase in her bupropion dosage, Jane had a 30-second episode of loss of consciousness and tonic-clonic activity which was later determined to be an aborted sudden cardiac death. She was then admitted whereupon her EKG was found to be indicative of Brugada Syndrome – a rare sodium channelopathy that can be induced by tricyclic antidepressant toxicity among a host of other etiologies and which often leads to ventricular arrhythmias and sudden cardiac death. During her inpatient stay, her nortriptyline was reduced from a total daily dose of 225 mg to 75 mg while maintaining her other home medications. Three days later, she was admitted to her home hospital for observation due to her EKG still showing a Brugada pattern. Her nortriptyline levels were drawn which were found to be at a supratherapeutic level of 189 ng/mL while having been on 75 mg for the past three days which would presuppose that her levels were significantly higher while on a total daily dose of 225 mg. She was titrated off her nortriptyline with eventual normalization of her EKG. Conclusion: It is important not only to be cognizant of how to properly use pharmacogenetic data within established guidelines but also to be cognizant of the false sense of security and potential complications that can arise from use of such data. As pharmacogenetic testing trends towards ubiquity, systemic safeguards need to be put in place that minimize patient harm from the clinical use of pharmacogenetic data.

No. 48

Anxiety Preventing Weaning From Artificial Ventilation: Three Clinical Cases and a Proposed Protocol

Poster Presenter: Aaron Winkler
Co-Author: Michael Stephen Peroski, D.O.

SUMMARY:

Consultation-liaison psychiatrists are often consulted to assist with difficult weaning from artificial ventilation, which can be challenging and is often complicated by significant anxiety experienced during the process. This is often exacerbated by medical comorbidities which can include delirium, infection, poor sleep, the use of analgesic medications, pain, physical discomfort associated with presence of the endotracheal tube itself, and other medical conditions. Weaning from ventilation is a psychologically complex experience for patients, in that the perception that one cannot effectively oxygenate is both a symptom and cause of anxiety and fear. Consulting teams may not have expertise dealing with the affective component of this process. Their difficulty is further compounded by a paucity of literature on the topic. Of the available studies, some discuss the use of therapeutic techniques including CBT and meditation, while others point to the use of medications to assist in ventilator weaning, including antipsychotics, benzodiazepines, and dexmedetomidine. We will critically review the literature on this topic, present a series of three complex clinical cases of difficult weaning from mechanical ventilation complicated by anxiety, and will propose a symptom-focused protocol for ventilator weaning.

No. 49

Underrecognition of Catatonia in Psychiatric Patients After Recent Cerebrovascular Accidents

Poster Presenter: Abigail Yoonah Jo Hahn, M.D.
Co-Authors: Josie Pokorny, M.D., Stephen Hahn, M.D.

SUMMARY:

Mrs. C is a 59-year-old female with a history of major depressive disorder with psychotic features and recent left thalamic stroke. She was admitted to medicine for failure to thrive, stupor, and somnolence. Psychiatry was consulted for possible underlying uncontrolled depression driving these symptoms as medical evaluation was largely unremarkable. The patient's recent history included an admission to Neurology three weeks prior, where she was found to have a left thalamic stroke. Then she was briefly transferred to inpatient psychiatry for depression and suicidal thoughts. After discharge to home, she was noted by family members to have difficulty performing activities of daily living,

decreased oral intake, and progressive weakness which led to a subsequent admission. The medicine team narrowed the differential diagnosis to major depressive disorder, esophagitis and post stroke deficits. Evaluation was challenging as the patient was a poor historian with minimal engagement on interview. The patient's condition initially improved with fluids, but she continued to lack oral intake and suffered from physical debilitation which led to worsening acute renal injury, nasogastric tube insertion, and consideration of a percutaneous endoscopic gastrostomy tube. The patient's presentation was concerning for catatonia given her withdrawal, stupor, and mutism. On initial evaluation, her Bush-Francis Catatonia Rating Scale score was 12. Following a 30-minute lorazepam challenge, the patient demonstrated a profound change in affect with resolution of stupor and engagement in oral intake and spontaneous conversation. Patient also had an improved Bush-Francis Catatonia Rating Scale score of 0. In this poster, we discuss the challenges in recognizing catatonia and the importance of having a low threshold for the utility of lorazepam challenge in hospitalized patients with medical conditions and catatonia symptoms to prevent further unwarranted interventions and medical complications.

No. 50

Clozapine-Induced Eosinophilia: Severe Effects From an Often-Underutilized Lab Value

Poster Presenter: Adam M. Berns, M.D.

SUMMARY:

Introduction: Clozapine was approved by the FDA in 1990 for the treatment of schizophrenia and other psychotic disorders. It is famous for its use in treatment-resistant schizophrenia and has shown to be far superior to other antipsychotics in this regard. Clozapine is known to have many minor and major side effects, with agranulocytosis, myocarditis, pleural effusion, and paralytic ileus being among the most severe. However, there is less literature on clozapine induced eosinophilia. Many case reports have found that clozapine can cause eosinophilia, leading to some of the most life-threatening side effects, including those listed above. We present a case of clozapine induced eosinophilia and how it may result in a severe medical comorbidity. Case Report: The patient is a 69 year old man with a history of schizophrenia with command auditory hallucinations who presented medically with sepsis and hyponatremia, and was transferred to a psychiatric facility for agitated behavior. After an unsuccessful trial with olanzapine, the patient was started on clozapine, which was titrated to 100mg. The patient's symptoms began to slowly remit. Six weeks after the initiation of clozapine, the patient was admitted to medicine for fever and leukocytosis. The patient was found to have a pleural effusion with 96% eosinophils and required a chest tube. On his CBC, the patient was found to have an elevated eosinophil count of 1.09 (normal 0.0-0.5) with a 19.4% differential count (normal 0-6.0%). An extensive medical workup, coordinated among multiple medical departments, including workups for malignancy, Churg-Strauss syndrome, and parasites, was negative. The difficult decision was made to taper and discontinue clozapine to prevent further end organ damage. The patient's eosinophil count downtrended, which correlated with the tapering of clozapine. The patient was discharged back to the original psychiatric facility. He was started on ECT and risperidone with some improvement in symptoms. The patient was eventually discharged with no lab abnormalities. Discussion: This case presentation adds to the literature that clozapine induced eosinophilia is not simply a benign lab finding, but rather a marker that may be associated with other potential life threatening medical complications. We strongly urge that eosinophilia and other medical side effects be monitored when starting a patient on clozapine. Although clozapine may improve a patient's symptoms drastically, these benefits must be weighed against the increased risks associated with an elevated eosinophil count in conjunction with end organ damage. The severity of these complications warrant the development of a clear management protocol in order to help clinicians decide how to manage clozapine.

No. 51

Catatonic Patient With May-Thurner Syndrome, Factor V Leiden Mutation That Develops Deep Venous Thrombosis: A Case Report

Poster Presenter: Darmant Bhullar, M.D.
Co-Authors: Felix Oscar Priamo Matos, M.D., Richard S. Arenson, M.D., Luisa S. Gonzalez, M.D.

SUMMARY:

Catatonia is the state of abnormal movements and behaviors which can occur due to both psychiatric and medical conditions. Literature review revealed that incidence of DVT (deep venous thrombosis) in catatonic patients is 25.3%, when compared to restrained patients without catatonia;(1) additionally, those with Factor V Leiden mutations have a baseline increased risk of DVT approximately 7 times that of non-carriers.(2) Therefore, these patients have a significantly higher risk of fatal pulmonary embolisms Catatonic state can lead to an increase in catecholamine and cortisol levels, which causes endothelial damage, thus propagating thrombus formation.(3) Adequate medical treatment can be challenging to enforce in decompensated psychiatric patients as their impaired mental state can lead to higher non-compliance rates. We present a case of a treatment noncompliant schizoaffective patient who was brought to the psychiatric emergency department due to disorganized behavior, developing sudden unresponsiveness and mutism. During her inpatient admission, patient developed left lower extremity pain and edema extending throughout the extremity. She was diagnosed with extensive DVT secondary to episodes of catatonic stupor. Further medical workup indicated that patient had May-Thurner Syndrome, heterozygous Factor V Leiden mutation, and Protein C deficiency. May-Thurner syndrome (MTS) occurs when the venous supply is compressed by the arterial system against bony structures in the iliocaval territory, the most common variant described as the compression of the left iliac vein between the overlying right common iliac artery and the fifth lumbar vertebrae. The extrinsic compression leads to venous outflow obstruction, subsequently causing venous hypertension, which overtime can lead to and present as DVT.(4) Thus far, a specific protocol for DVT prevention and treatment has not been established in psychiatry.(5) This case aims to outline possible pharmacological and behavioral management of DVTs in non-compliant psychiatric patients, especially during the inpatient hospitalization.

No. 52

A Case of Persistent Altered Mental Status: Is It Mental Illness, Medication, or Malignancy?

Poster Presenter: Darya Terekhova
Co-Authors: Leonid Kapulsky, M.D., Janna S. Gordon-Elliott, M.D.

SUMMARY:

Altered mental status (AMS) is a common condition that has many treatable causes. In presence of a known psychiatric disorder, questions about a primary psychiatric process, medication effects, and sometimes stigma related to mental illness can complicate the diagnosis and management of AMS. We present a case of severe persistent AMS that illustrates this challenge. A 63-year-old man with bipolar disorder was admitted to the hospital with AMS that had developed over several weeks. Three months prior to the presentation he was hospitalized for a manic episode in the setting of lithium nonadherence, for which he was treated with reinitiation of lithium to high therapeutic levels (1.2-1.5 mEq/L), fluphenazine and valproate. His mania improved but following discharge he became acutely confused and was subsequently medically hospitalized, during which time he was taken off lithium and fluphenazine and his valproate dose was increased to 1 g bid. The patient's mental status deteriorated further and his family transferred him to our hospital. On presentation, the patient was restless, without any apparent awareness of his surroundings and nonverbal. The psychiatric consultation-liaison (C-L) team was called to assess for management of his bipolar disorder and a full medical workup was recommended. The evaluation revealed mild hypernatremia (149 mmol/L) and excluded common toxic, metabolic and infectious etiologies. Generalized parenchymal volume loss was seen on brain MRI and EEG revealed mild diffuse cerebral dysfunction and intermittent diffuse delta sharp waves. His CSF had normal parameters and was negative for testable infectious agents; a sample was sent for paraneoplastic antibody testing. With these nonspecific findings, focus remained on whether this presentation could represent an episode of the patient's bipolar illness. The C-L team followed to help manage his behavior. Valproate was adjusted to a therapeutic range (73.0 mg/L) and quetiapine was initiated at 25 mg qHS and increased to 25 mg at noon and 75 mg qHS. The diagnosis of

lithium neurotoxicity resulting from the combination of lithium and fluphenazine was considered (1, 2). However, it did not provide a specific prognosis since lithium neurotoxicity can be both reversible or irreversible with unclear predisposing factors (1, 2). During the third week, the paraneoplastic panel results returned positive for anti-voltage gated potassium channel antibodies, a malignancy workup was ordered and intravenous immunoglobulin therapy was started. The case illustrates the complexity of assessment and management of a patient with psychiatric illness who presents with persistently altered mental status. The evaluation may be skewed towards presuming the symptoms are due primarily to the mental illness or medications. With thoughtful collaboration between consulting teams, including the psychiatric service, a careful evaluation can be done, leading to appropriate treatment and good patient care.

No. 53

"I Have Been Poisoned!": An Unusual Presentation of a Hematological Malignancy With Subsequent Complication by Steroid-Induced Psychosis

Poster Presenter: Diana V. Punko, M.D., M.S.
Co-Author: Meytal Fabrikant, M.D.

SUMMARY:

Ms. N, a 61-year-old female with history of schizoaffective disorder, presented to the ED with complaint of diffuse pain and suspicion that she had been poisoned. The patient reported a vague history and was unable to elaborate much further. In the ED, labs were significant for hemoglobin 7.0 g/dL and Coombs-positive autoimmune hemolytic anemia. Patient was admitted to medicine for management and diagnostic workup. Despite patient's insistence that she had been poisoned, toxicology workup was unremarkable. Literature review revealed limited evidence that her home medications – lithium, quetiapine, and bupropion – were implicated in her anemia, but nonetheless lithium was held due to concern about potential hematological effects. Per hematology, patient was started on prednisone and titrated to 60mg PO BID. On initial presentation, patient was found to be oddly-related with this apparent poisoning delusion but was otherwise calm, organized, and did not appear to be internally preoccupied. During the hospital course she became paranoid, pacing the hallways in the evening, at times talking to herself. Patient's hemoglobin responded well to medical management, and she was discharged on prednisone with hematology follow up. The discharge was coordinated with patient's Assertive Community Treatment (ACT) team, an intensive outpatient treatment service for individuals that have been diagnosed with a severe and persistent mental illness. Despite the close follow up and support of the ACT team, four days later patient was admitted to the psychiatry service as she complained of auditory hallucinations and demonstrated increasing paranoia and disorganization. These symptoms were attributed to steroid-induced psychosis/exacerbation of her underlying schizoaffective disorder in the setting of recent diagnosis of a serious and potentially life-threatening illness. Additionally, patient had been non-adherent to prednisone secondary to paranoia, and her hemoglobin reached a nadir of 4.8 g/dL. Patient was followed by hematology and ultimately diagnosed with small lymphocytic leukemia. Prednisone was tapered, and ibrutinib was started with good response. Patient returned to her psychiatric baseline and was discharged again to care of the ACT team. In this poster we discuss how this case illustrates a number of challenges faced by patients with both severe mental illness and co-morbid medical illness. We highlight patients who require treatment with medications that may exacerbate their underlying psychiatric disorder, who have paranoia about medications and resultant issues with adherence, and who risk decompensation triggered by the stress of being diagnosed with a serious medical illness. We propose mechanisms to mitigate these challenges through close collaboration between medical and psychiatry services, educating both the patient and family about the potential for medications to cause psychiatric side effects, and engaging the close support of the ACT team.

No. 54

When Benzos Don't Work: The Role of ECT and Adjunctive Medications in the Treatment of Catatonia

Poster Presenter: Ehren I. Ekhause, M.D.
Co-Authors: Michelle Tuyet To, M.D., Naalla D.

Schreiber, M.D.

SUMMARY:

Mrs. T, a middle-aged eastern European woman with a past psychiatric history of schizoaffective disorder-bipolar type, tardive dyskinesia, and major neurocognitive disorder presented to the psychiatric consult service with malignant catatonia that had not improved on IV lorazepam administered at an outside medical hospital. The patient had originally been transferred from a psychiatric hospital to this outside hospital after she became catatonic during the treatment of a manic episode. A full neurological work up including EEG and MRI were unrevealing. Upon transfer to our hospital, the patient was mute, stuporous, bedbound, and rigid in all 4 extremities. She required a feeding tube. IV lorazepam was further titrated up with little effect on symptomatology. Memantine was prescribed, but the patient remained catatonic. ECT was initiated. After 5 rounds of ECT, Mrs. T was notably less rigid and was intermittently able to follow simple commands. However, she was, for the most part, unresponsive. Haloperidol was restarted to treat her psychotic illness, which we suspected was the most likely cause of her catatonia. Pt had thrice weekly ECT with progressively increasing dosages, and by the 10th round of ECT, she was more alert and could sit up in bed and make some purposeful movements. ECT was discontinued after 14 rounds when her improvement plateaued. Lorazepam was tapered off gradually due to concerns for oversedation. Following her final round of ECT, she began taking food by mouth but remained incontinent and bedbound. Her haloperidol was further titrated to manage suspected psychotic illness. She gradually regained her baseline functioning and was fully ambulating, toileting, and taking food by mouth about 3 weeks following the last round of ECT. Her haloperidol was discontinued during that time due to QTc prolongation and concern for EPS. Olanzapine was initiated and titrated up to manage continued psychotic and manic symptoms which became evident as the patient's functional status improved. In this poster, we plan to discuss the challenges of treating catatonia refractory to benzodiazepines. We will identify the various factors which negatively impact the treatment of catatonia. We will review the literature on catatonia to highlight alternative pharmacologic treatments. We hope to educate psychiatrists on the importance of aggressively treating refractory catatonia given its significant morbidity. We intend to present a treatment algorithm that lays out the role of sequential medication trials and parameters to maximize ECT response.

No. 55

Psychiatric Sequelae of Anti-DPPX Encephalitis: Case Report and Review of the Current Literature

Poster Presenter: Erin A. Dean, M.D.
Co-Authors: Swapnil Khurana, M.D., Christopher Sola

SUMMARY:

Psychiatrists are often asked to help manage patients experiencing psychiatric symptoms resulting from an underlying neurologic process. Dipeptidyl-peptidase-like protein-6 (DPPX) is a subunit of the voltage-gated A-type Kv4.2 potassium channel complex and is the channel responsible for transient, inhibitory currents in the central and peripheral nervous systems. Antibodies against DPPX can lead to encephalitis characterized by prodromal gastrointestinal symptoms, CNS hyperexcitability and cognitive deficits. More recent literature has highlighted psychiatric sequelae as well. We present a 54-year-old man evaluated for diarrhea leading to significant weight loss, followed by new-onset cognitive deficits. Extensive evaluation revealed DPPX antibodies in his CSF, and PET scan showed basal ganglia and cortical hypometabolism, suggestive of encephalitis. He was admitted, underwent plasmapheresis treatments for antibody removal, and was discharged home. Although psychiatry was not involved during admission, he was started on mirtazapine to assist with sleep, appetite and depressed mood. He initially did well after his plasmapheresis treatments, describing increased energy and denying lingering depression. However, his cognitive deficits continued to worsen. Two months after admission, family members noted new psychiatric symptoms including agitation and behavioral changes. He became increasingly confused and began expressing overt paranoia. His mood symptoms worsening, he reportedly composed a suicide note to his family. His neurologist stopped his mirtazapine, replacing it with low-dose quetiapine, which did not prove

beneficial. An even-tempered, non-violent man at baseline, he revealed a plan to kill his family. He was readmitted to a medical ward where psychiatry was consulted for management of his fluctuant mood, personality changes and delusions and erratic behaviors. On evaluation, he was calm and cooperative but was exhibiting delusional paranoia. His dose of quetiapine was increased to improve mood and psychotic symptoms. He underwent more plasmapheresis treatments followed by initiation of rituximab to manage his active B cell-mediated encephalitis. Throughout hospitalization, he demonstrated mood lability, poor sleep and impulsivity. Low dose divalproex was added for these symptoms. He was discharged on divalproex and quetiapine, with a plan to continue rituximab as an outpatient. Two months after hospitalization, he described improvement in his cognitive ability and gastrointestinal symptoms and resolution of his paranoia with cessation of odd behaviors. This case provides an opportunity to discuss anti-DPPX encephalitis, a condition rarely reported in current literature. We will review the pathophysiology of this illness and discuss illness progression, with an emphasis on potential psychiatric symptoms. We will also review the recommended treatments for neurological and psychiatric symptoms associated with this form of encephalitis.

No. 56

An Unusual Example of Neuropsychiatric Phenomena: Case Report and Literature Review

Poster Presenter: Kelli Marie Ruby, D.O.
Co-Authors: Walter Kilpatrick, Steven V. Fischel, M.D., Ph.D.

SUMMARY:

Purpose: The potential relationship between epilepsy and psychiatric symptoms has been evidenced in the scientific literature for the past 100 years, with potential behavioral disturbances described as occurring across the spectrum of ictal, postictal, and interictal periods. Specifically during the postictal period, aggression, panic, and psychosis are the most common neuropsychiatric symptoms seen. Manic symptoms are much less common, but do occur in a subset of epilepsy patients. This poster describes a case of new-onset partial complex seizures with postictal mania and reviews the literature regarding manic symptoms and epilepsy. We offer a case report which describes the clinical, electroencephalographic, and neuroimaging findings in a 59 year old man with history of CVA, who presented with new-onset complex partial seizure disorder complicated by postictal mania. This is a rare condition that is most commonly associated with complex partial seizures arising from a temporal focus. However, electroencephalography determined that our patient had primarily frontal epileptogenic foci. Treatment was complicated in this patient in terms of continued breakthrough seizures and behavioral management. Methods: We collaborated with the Baystate Medical Center Neurology Department and Electroencephalographic laboratory. We utilized Medline and Pubmed for literature review. Results: Our patient presented with postictal mania in the setting of new seizure disorder. His complex partial seizures were found to have multiple foci; however the most prominent focus was frontolateral in nature. This is an uncommon presentation of an already rare condition. Treatment was complicated, with some improvement being seen with control of seizures using valproic acid, phenytoin, and gabapentin. To manage behavior, olanzapine proved to be a better agent than risperidone for this patient. Conclusions: Consultation-liaison psychiatrists are often called to help manage behavior of patients in the hospital setting, especially when evaluation reveals presence of manic symptoms. However, seizures can produce symptoms similar to psychiatric conditions in the ictal, interictal, and postictal periods. Therefore, it is important to be able to identify postictal mania syndromes and apply this diagnosis to guide treatment decisions.

No. 57

Hepatotoxicity and Pancreatitis Secondary to Valproic Acid Treatment in a Patient With Manic Psychosis: A Case Report

Poster Presenter: Krishen Persaud
Co-Authors: Guitelle St.Victor, M.D., Michael Esang, MB.Ch.B., M.P.H., Fatemeh Parsian

SUMMARY:

A 20-year-old male admitted to medicine with a past psychiatric history of bipolar disorder, synthetic cannabinoid and phencyclidine use, presented with

abdominal pain, jaundice, and transaminitis. An abdominal ultrasound showed ill-defined patchy areas of hyperechogenicity in the posterior right hepatic lobe, favoring focal fatty infiltration. Psychiatry was consulted for psychosis and disorganized behavior. He was previously prescribed VPA titrated to 1500 mg daily for six weeks which was discontinued due to acute jaundice. The consultation team recommended lorazepam 3-6 mg and lithium carbonate 600 mg daily. He remained floridly psychotic and was admitted to inpatient psychiatry. He was started on paliperidone 3 mg, while lithium carbonate and lorazepam were further titrated. After 72 hours, he developed nausea, vomiting, and epigastric pain radiating to the back. Lab results showed serum lipase of 3648 and WBC of 16.21. This clinical picture raised a strong suspicion of acute pancreatitis. Patient was returned to medicine where he was treated with IV fluid hydration and nil per os diet. A week later he was medically cleared and readmitted to the psychiatry inpatient unit for further stabilization. Discussion: Valproic acid mediated hepatotoxicity is thought to be caused by inhibition of the mitochondrial ?-oxidation pathway leading to mitochondrial toxicity and microvesicular steatosis. The most common hepatic adverse reaction of VPA are mild elevations of aminotransferases.(3) The proposed mechanism of VPA-mediated pancreatitis involves the depletion of enzymes that act as free-radical scavengers.(2) This leads to accumulation of free oxygen radicals which damage cells by membrane lipid peroxidation, protein modification, and DNA damage, ultimately leading to tissue damage.(1) Literature review reveals that VPA-induced pancreatitis is not dependent on VPA serum level and commonly occurs within a year of commencement of therapy.(2) Conclusion: This case illustrates the need for physicians to educate patients treated with VPA about the side effects of pancreatitis and hepatotoxicity that may require prompt medical evaluation. We recommend close observation and diligent reporting of adverse effects.

No. 58

Off-Label Usage of Atezolizumab Inducing Encephalitis in Hepatocellular Carcinoma

Poster Presenter: Matthew Alexander Petrilli, M.D.
Co-Author: Philip R. Muskin, M.D., M.A.

SUMMARY:

Atezolizumab, a programmed death ligand 1 (PD-L1) inhibitor is currently FDA approved for the treatment of urothelial carcinoma and non-small cell lung cancer (NSCLC). It has been shown to have a variety of autoimmune side-effects. To date, there have been only 2 accounts of autoimmune encephalitis in the literature; a published case report and one mention in a phase 2 open label trial. This case is of a 70-year-old man with no formal past psychiatric history and a medical history notable for hepatitis C, complicated by hepatocellular carcinoma. He presented with frequent falls, worsening paranoia, thought disorganization and intricate visual hallucinations. Collateral from family revealed that the patient was cognitively intact and fully functional up until 12 weeks prior to the admission. He was enrolled in a phase 1 trial of atezolizumab for treatment of hepatocellular carcinoma. Brain imaging, along with lumbar puncture, paraneoplastic panel, and viral serology were all unremarkable. Laboratory work was notable for a cortisol level of 1.00 ug/dL and an ACTH level of 9 pg/mL with normal LH, FSH, prolactin and aldosterone. The patient was diagnosed with secondary adrenal insufficiency, a known side-effect of atezolizumab, started on IV steroids, and transitioned to oral steroids with dramatic resolution of his symptoms in an 8 day period. Although adrenal insufficiency can cause psychiatric manifestations, florid psychosis occurs less commonly and the quick resolution with steroids is more suggestive of autoimmune encephalitis. As immunotherapies are rapidly emerging as an option to treat malignancy, we can expect to see previously unknown side effects. Neuropsychiatric sequelae pose a significant complication to immunomodulating therapies such as atezolizumab and further case descriptions and research is required to advance the understanding of these medications.

No. 59

Caught in the Middle: Challenges in Transferring "Patients Not Wanted on Any Wards"

Poster Presenter: Michael Esang, MB.Ch.B., M.P.H.
Co-Authors: Guitelle St.Victor, M.D., Krishen Persaud

SUMMARY:

A small study published in 2008 by Christodoulou et al has revealed characteristics common to patients transferred to inpatient Psychiatry. These include living alone, belonging to a lower socioeconomic class, presenting with a disturbed and disruptive behavior, having a recent suicide attempt with persistent suicidal ideation, and the presence of a personality, neurodevelopmental, or neurocognitive disorder. We present two challenging cases that illustrate the above. The first is the case of Ms. A., a 64-year-old White female who had a past history of schizoaffective disorder, bipolar type, normal pressure hydrocephalus status post ventriculoperitoneal shunt placement, obstructive sleep apnea, obesity hypoventilation syndrome, and bronchial asthma, admitted to medicine after a mechanical fall at home. C-L Psychiatry was consulted for mania and psychosis. She was managed in the medical ICU for MRSA pneumonia with hypoxia. She was then transferred to medicine where she was medically cleared for admission to inpatient Psychiatry. She was not accepted by the inpatient Psychiatry team on account of the specialized care required for her medical comorbidities. After two weeks of intervention from the hospital's administration she was transferred. Within nine days, she became severely hypoxic and returned to medicine. On medicine she was stabilized, and with significant struggle, was re-admitted to inpatient psychiatry briefly, only to return to medicine for hypoxia where she expired. The second case involves a 28-year-old White male diagnosed with chronic schizophrenia and Cluster B personality disorder, who was admitted to the medical ICU following a suicide attempt via ingestion of a mixture of sodium hydroxide solution and liquid drain cleaner. He had also ingested about 50 pills of naproxen and ibuprofen. He developed fungemia from total parenteral nutrition, and required a jejunostomy for feeding. After successful medical treatment, he was medically cleared for transfer to inpatient Psychiatry. As he was uncooperative, a court order for Treatment Over Objection was obtained. Deemed too medically compromised by the inpatient Psychiatry team, intervention from the hospital's administration was necessary for his eventual transfer to inpatient Psychiatry. These cases illustrate the challenges faced by C-L Psychiatrists in transferring significantly compromised patients from non-psychiatric wards to inpatient Psychiatry. Although C-L Psychiatry traditionally operates at the intersection of Psychiatry and other medical specialties, the successful management of these patients taxed every discernible skill and expertise provided by the consulting psychiatrists. Both cases bring into sharp relief the complexity of situations where a psychiatric illness hinders adequate care of medical comorbidities and vice versa. In presenting these sophisticated cases, we hope to explore the difficulties in finding a balance between liaising and consulting.

No. 60

Investigations in the Early Aftermath of Trauma: An Analysis of Several Medications and Vital Sign Changes Implicated in the Development of PTSD

Poster Presenter: Stanley Lyndon, M.D.
Co-Authors: Samantha Chesney, Samantha Durbin, Joshua Hunt, Terri deRoon-Cassini

SUMMARY:
Background: Post-traumatic stress disorder (PTSD) has a lifetime prevalence of approximately 9% in the United States. 20-30% of patients admitted to trauma centers after an acute trauma meet criteria for PTSD in six months. (1) The point at which a traumatic event occurs represents the first opportunity to disrupt the acquisition and consolidation of the memory. Among the most robust are data suggesting that modulation of the endogenous opioid system may inhibit fear consolidation. (2) Medications such as morphine and propranolol, vital signs as well as loss of consciousness have been implicated in this modulation. (3) As these were discrete reports, a comprehensive analysis of all implicated factors in a single group of patients was attempted to rule out potential confounders. Methods: 158 patients who were admitted to the inpatient trauma service following an acute trauma were included. Exclusion criteria were age less than 18, GCS less than 13, and moderate-severe TBI. The patients completed PCL-5 at presentation, and CAPS-5 and PCL-5 at 1-month and 6-month follow-up. Data was collected from hospital records as well as ambulance field records. Variables collected included type of opioids, beta-blockers, benzodiazepines, and corticosteroids used,

their route of administration, time of administration and total dose. Heart rate, respiratory rate, blood pressure, and pain scores at various time points were also collected and analyzed. Results: Out of an N of 158, 114 were male, 44 were female. 80 were Caucasian, 62 were African-American, and 14 were Hispanic. Age ranged from 18 to 89, with an average of 41. 39 patients met CAPS-5 criteria for PTSD at 1 month post injury, and 30 met CAPS-5 criteria for PTSD at 6 months. Higher opioid use was related to lower arousal symptoms at both time-points (p=0.03). Benzodiazepine use was associated with higher avoidance and arousal symptoms at six-months (p=0.03). No significant associations were found with beta-blockers and corticosteroids. Lower systolic blood pressure in the field, ER, and discharge (p=0.04), lower initial heart rate (p=0.03), and higher pain scores at discharge (p=0.02) were all associated with PTSD at both time-points. Respiratory rate was not related to the development of PTSD at either time-point. Conclusion: While benzodiazepine use was associated with higher arousal and avoidance symptoms, opioid use was associated with lower arousal symptoms. Also, as higher discharge pain scores were associated with significant PTSD symptoms at both 1 month and 6 months after trauma, it may be prudent to treat posttraumatic pain adequately with opioids to lower PTSD symptom severity, although prospective studies have to be conducted to explicate the protective effect.

No. 61

Effectiveness and Tolerability of Aripiprazole in the Treatment of Delirium in Long QT Syndrome

Poster Presenter: Stanley Lyndon, M.D.
Co-Authors: Christopher Robert Takala, D.O., Rosa K. Kim, M.D.

SUMMARY:

Background: While there is growing literature on the use of aripiprazole in delirium(1) and the use of aripiprazole in children(2), there are no published studies evaluating aripiprazole as a treatment of delirium in children. We describe the treatment of hyperactive delirium with aripiprazole in an adolescent with congenital long QT syndrome and pre-B-cell acute lymphoblastic leukemia. Methods: 15-year-old with congenital long QT syndrome was admitted to the hospital after developing colonic perforation and E. coli sepsis following chemotherapy for a recent diagnosis of acute lymphoblastic leukemia. She underwent hemicolectomy with diverting ileostomy, and developed delirium following the procedure. Deliriogenic agents including benzodiazepines and opiates were minimized, and non-pharmacological methods to restore the patient's sense of time and familiarity were optimized. Initial pharmacological interventions included the use of melatonin and trazodone to help the patient reestablish her sleep-wake cycle. None of these interventions improved the patient's hyperactive delirium and repeated episodes of severe agitation. The use of dexmedetomidine was limited by the patient's bradycardic response, the use of valproic acid was limited by low platelets, and the risk of torsades precluded the use of the antipsychotics commonly used in the treatment of delirium. Aripiprazole was then started at a low dose of 2 mg daily after consultation with cardiologists. Given its relatively low propensity to cause QTc prolongation compared to the other antipsychotics, the potential benefits outweighed the risks. Results: The patient's sensorium and affect drastically improved over the next few days, and delirium resolved completely within a week, as assessed by CAM-ICU and NuDESC delirium rating scales. While QTc increased from 436 to 460 ms over the treatment duration, this was well within the safe limits for this patient, especially as multiple serial EKGs and telemetry did not show any evidence of arrhythmia. Aripiprazole was eventually discontinued safely with no relapse of delirium. Conclusion: Our patient tolerated aripiprazole well, experienced minimal adverse effects, and demonstrated improvement of delirium within a few days. Aripiprazole is an underutilized but useful medication in the treatment of agitation and confusion in children suffering from delirium, particularly in cases where risk factors preclude the use of other treatment options.

No. 62

The Value of Distress Screening and the Efficacy of Psychosocial Interventions in Psycho-Oncology: An Analysis of Observational Data

Poster Presenter: Stanley Lyndon, M.D.
Co-Authors: Sarah Elizabeth Slocum, M.D., Jennifer

Knight

SUMMARY:
Background: The diagnosis and treatment of cancer can lead to high levels of psychological distress and significantly impair quality of life.(1) Timely detection of these is essential for offering appropriate care and preventing comorbid psychopathology.(2) The National Comprehensive Cancer Network recommends using a single-item Distress Thermometer (DT) for screening. These scales have been extensively validated and have a cutoff score of >=4.(3) Evidence suggests that simply screening patients is not enough. Designing evidence-based psychosocial interventions and referral to appropriately trained professionals are recommended for further management. However, while specific psycho-oncology interventions are described in the literature, baseline distress characteristics of patients presenting to a psycho-oncology clinic, as well as the distress-reducing effect of standard clinic visits are under-described. Here we evaluate baseline distress levels of patients receiving psycho-oncology services at four cancer clinics and the change in distress scores after a 1-2 session psycho-oncology intervention. Methods: Patients completed DT at the beginning of their first and second visits and repeated the DT at the end of both visits. The visits comprised of a combination of pharmacotherapy and psychotherapy, and lasted up to an hour. Results: The analysis included 146 patients at first visit and 38 patients returning for a second visit. Age ranged from 19 to 79 years, with an average age of 47. 110 of the 146 were female, and 130 out of 146 were Caucasians. The average distress score was 5.71 at the beginning of first visit (PRE1), 3.86 at the end of first visit (POST1), 4.71 at the beginning of second visit (PRE2), and 2.82 at the end of second visit (POST2). Wilcoxon-Signed Rank Test was used to assess the paired difference between the visits. Difference between POST1 and PRE1 had a two-tailed Z value of -8.938 (p=0.000), significantly larger than the ±1.96 critical value required for a 95% confidence interval, suggesting a significant decrease in distress scores from a single hour-long intervention. There was a significant improvement in distress scores from PRE2 to POST2 (Z = -4.618, p=0.000). Distress scores were not significantly different between the end of the first visit and the beginning of the second (Z = 1.050, p=0.307), suggesting a persistence of the effect of the first intervention on the distress score. The average duration between the two visits was 17 days. Friedman test was done to substantiate the above findings (p=0.000). Conclusion: In adult cancer patients, a one-hour psycho-oncology intervention administered over one to two sessions significantly reduced patients' distress. This effect persists beyond the initial intervention. To our knowledge, this is the largest study to date describing distress among patients presenting to a psycho-oncology clinic and the impact of a psycho-oncology intervention to reduce distress scores.

No. 63

QTc Prolongation by Psychotropic Drugs and the Risk of Torsade De Pointes

Poster Presenter: Mousa Botros, M.D.
Co-Author: Krystal Leigh Nicht, M.D.

SUMMARY:
Clinical Case: This is a 48-year-old African American female with past psychiatric history of paranoid schizophrenia, anxiety and PTSD and past medical history of GERD, Migraine headaches, DMII, HLD, OSA, history of Pseudotumor cerebri who presented voluntarily to the emergency room due to anxiety. Patient referred to progressive course of debilitating paranoid thoughts fearing for her safety describing people are watching her and trying to hurt her. She intermittently eluded to poor appetite due to concerns the food is poisoned. She referred to unintentional recent weight loss of about 15 lbs over 2 months. Reported over 2 months before her presentation she has not been compliant with her home regimen Seroquel 300mg PO Daily and 600mg PO at bedtime. Upon examination, patient was not in acute physical distress. Patient's vital signs were essentially within normal limits. Laboratory investigations were suggestive of dehydration with elevated glucose levels (163mg/dl), elevated creatinine (1.8mg/dL) (n. 0.66-1.25 mg/dL) and urea nitrogen (37mg/dL) (n. 9-20 mg/dL), low estimated GFR (Glomerular Filtration Rate) (36mL/min/1.73m2). A picture of mild microcytic hypochromic anemia as well as mild leukocytosis (11.7wbc/hpf) was noted. Serum electrolytes revealed hypokalemia (3.4mEq/L). The urine

toxicology screen was presumed positive for benzodiazepines and cannabinoids. Patient received intravenous fluids in the medical emergency room. Patient was deemed medically cleared to be admitted to a psychiatry inpatient unit for stabilization. The patient received Seroquel 300mg PO one time at 14:49. Approximately one hour later, at the nursing station counter, the patient slowly slumped down towards the floor from a standing position with loss of consciousness. The patient remained unconscious for a short time. Vital signs showed BP 80/40 with HR 86. Finger Sticks Glucose were in the range of 96 – 134 mg/dL. Hospital Course: A code was called and the medical physician on duty evaluated the case to further investigate possible ACS vs arrhythmia vs hypovolemia. A 12-lead EKG was noted negative for ischemia but with prolonged QTc of 589msec. Patient was transferred to the CCU under telemetry. A 1:1 sitter was ordered for safety. Antihypertensive agents were discontinued. Intravenous fluids (3L of normal saline) were initiated. Repeat labs showed serum creatinine of 1.2mg/dL, low normal serum magnesium level of 1.7mEq/L (n. 1.7-2.2mg/dL) and a series of 3 negative serum troponins. An echocardiography was done showing an ejection fraction that was within normal limits with no significant valve abnormalities. After 48 hours, patient was stabilized. A series of repeat 12-lead EKGs were used to monitor the QTc, finally trending down to 460msec. Patient was followed up closely by the psychiatry consultation liaison service. She was prescribed Olanzapine 2.5mg PO at bedtime for psychosis. Patient was medically and psychiatrically stable and was discharged to self.

No. 64

Self-Induced Abscesses and Repeated Septicemia: Care at What Cost?

Poster Presenter: Tia Mansouri, M.D.

SUMMARY:

Self-induced infections are frequently thought to be a form of factitious disorder, associated with case reports in literature of patients creating a disease state by injecting themselves with contaminated substances to produce cutaneous infections, bacteremia, skin graft failures, and wound healing disorders. A case is reported of a 40-year-old female with a medical history of diabetes mellitus type 1, and a past psychiatric history of depression, anxiety, intravenous drug abuse, as well as chronic pain, who presents after a series of admissions for abscesses on her outer thighs requiring recurrent incision and drainage. Factitious disorder was suspected and psychiatric consultation evaluation was requested. She underwent incision and drainage of multiple bilateral abscesses of the thighs, while receiving broad-spectrum antibiotics and being monitored for septicemia and elevated blood glucose levels. The patient reported developing abscesses approximately once monthly and emphasized that she had not seen a psychiatrist in a “long time” because of a number of reasons such as insurance changes, multiple hospitalizations, and receiving refills of her medications (Paxil, Klonopin, Trazodone) from the hospital when she is discharged. She reported injecting herself at least 5 times a day with insulin, and only developing infections where she injects herself (flank, arm, etc), though she reported using clean equipment. However, when the patient was placed on continuous monitoring for self-harm behaviors, both on prior admissions and during recent encounters, she threatened to leave against medical advice, and in some instances, was successful in doing so. Prior evaluation notes that she was found to be self-injecting with contaminated materials, presenting a challenge for providers. In this poster presentation, the current criteria for factitious disorder and malingering in the Diagnostic and Statistical Manual of Mental Disorders 5th edition are reviewed, as motivating and incentive factors play a key role in distinguishing the two. The notion of how these relate to extreme poverty, chronic pain and opioid abuse, and under-treatment of psychiatric conditions will be explored. Other topics to be discussed will include capacity to refuse treatment and to leave against medical advice, as well as the challenges of creating a therapeutic alliance with such patients. Lastly, the poster will discuss suggestions for multi-disciplinary care coordination between providers in surgery, medicine, and psychiatry.

No. 65

The Evil Eye and Its Remedies: Reflections on Witchcraft, Hypnosis, and Psychosomatic Medicine

Poster Presenter: Viki Katsetos

SUMMARY:

The evil eye, the belief that looking upon someone with envy or jealousy can bring about bodily symptoms, stems from antiquity and is found in multiple cultures. Despite this ubiquity, the evil eye for many may conjure up images of the Old World, of ill-held superstitions long since negated by science. However, belief in the evil eye persists. The poster would elaborate on the history and traditions of the evil eye and its impact on modern day life and medicine. Areas of focus include the relationship between the evil eye and witchcraft fears in Europe. In particular, the poster would explore how "overlooking" was thought to be a way evil witches brought about physical harm to victims while the "spells" or remedies of good witches could undo this harm. With time, alternative scientific explanations and treatments were sought other than witchcraft to explain the bizarre physical symptoms predominantly women would experience. Coincidentally, these newer treatments, which included animal mesmerism and hypnosis, have parallels with evil eye remedies. The poster also aspires to describe how the concept of the evil eye continues to have an impact on the modern day health visit. Openness towards better understanding these beliefs not only allows for increased cultural awareness but can also provide information about the psychosocial stressors a patient is facing. After all, at its most basic core, the evil eye is a belief that interpersonal and intrapersonal strife can indeed manifest as somatic symptoms.

No. 66

Medical Incapacity Hold Policies Reduce Inappropriate Use of Involuntary Psychiatric Holds and Protect Patients From Harm

Poster Presenter: Michael Francis Zito, M.D.
Co-Author: Jonathan Pascal Heldt, M.D.

SUMMARY:

Background: Hospital inpatients with altered mental status often lack capacity to make healthcare decisions and are at risk of harm or death if they leave the hospital against medical advice. Despite this, most states do not have statutes for detaining patients who lack capacity as the result of a medical illness. Instead, the only available form of detainment in most jurisdictions is an involuntary psychiatric hold (IPH), also known as civil commitment, which is intended only for patients with a mental disorder as legally defined by the state. Nevertheless, clinical situations frequently arise in which detainment is necessary even in the absence of a clearly defined mental disorder, leading to inappropriate utilization of IPH statutes. Use of IPHs to detain patients lacking capacity may provide an unambiguous resolution to an acute crisis and mitigate the risk of patient harm. However, it also deprives the patient's civil liberties, risks provider liability for violation of mental health law, and obstructs appropriate disposition by implying the need for psychiatric treatment where it does not exist. Medical incapacity hold (MIH) policies, which permit the detainment of patients who lack capacity but do not meet criteria for an IPH, provide a potential solution. However, the effects of MIH policies have not been formally evaluated. Methods: A retrospective chart review was conducted on all adult medical/surgical inpatients placed on either an IPH or an MIH over the 1-year periods directly before and after implementation of an MIH policy at an academic medical center. The primary outcome was the frequency of IPH utilization in patients without evidence of a mental disorder as determined by two independent physician reviewers. A Cohen's kappa was calculated to determine the level of agreement between the two reviewers. Results: The Cohen's kappa score was 0.72 indicating substantial agreement between reviewers. Prior to MIH implementation, 17.6% (32/182) of all IPHs were placed on patients without a mental disorder. This decreased to 3.9% (6/152) following MIH implementation. A total of 70 MIHs were placed during the study period, with a mean duration of 4.3 days (range 0.0-17.7 days). Psychiatry and ethics were consulted in 78.6% and 18.6% of MIH cases, respectively. No instances of patient harm or litigation for malpractice, provider negligence, and/or false imprisonment were found in either study period. Conclusion: MIH policies represent a potential option for healthcare systems seeking to protect patients lacking capacity from harm while avoiding inappropriate use of IPH law. Further study of the effects of MIH policies in other healthcare systems is needed to validate these initial findings. Should the evidence continue to support the

appropriateness and efficacy of MIH policies, changes to relevant laws could be proposed to offer formal legal protection to providers attempting to act in the interests of their patients.

No. 67

The "e5150": Benefits of an Electronic Medical Record-Based Workflow for Initiating and Managing Involuntary Psychiatric Holds

Poster Presenter: Jonathan Pascal Heldt, M.D.

SUMMARY:

Background: Involuntary psychiatric holds (IPHs) are used across the United States to detain a patient considered to be a danger to self, a danger to others, and/or gravely disabled for the purpose of psychiatric hospitalization. The process of applying for an IPH varies between states but generally involves the submission of an affidavit (known as a "5150" in California) certifying the conditions of detainment. Even as many healthcare institutions transition to an electronic medical record, the process of submitting and managing the affidavit for an IPH often remains paper-based. This traditional workflow has several potential faults, including missing, incomplete, or illegible paperwork as well as staff and time inefficiencies. We report on our institution's experience after implementing an electronic version of an IPH known as the "electronic 5150" ("e5150"). Methods: Implementation of our institutional e5150 involved creating a visually similar electronic legal document, developing a new workflow in the electronic medical record (Epic Systems), obtaining approval from the Los Angeles County Department of Mental Health, and conducting staff education on writing and accessing the legal documents. A retrospective review was conducted on all e5150s written for patients presenting to the emergency department of an academic institution over a two-week period after implementation (6/5/17-6/19/17) and compared to all paper 5150s written over a two-week period prior to implementation (6/5/16-6/19/16). The primary endpoint was the time until availability (TUA) between IPH initiation (the start time of writing the legal document) and availability in the electronic medical record. Statistical analysis was conducted using a two-tailed Student's t-test in Microsoft Excel version 14.5. A secondary analysis was conducted using in vivo time analysis comparing psychiatry residents' workflow between e5150s and paper 5150s (study and analysis in process). Results: A total of 1771 e5150s were submitted over a one-year period following implementation of the e5150. Over the selected two-week study periods, the mean TUA for the e5150 was 1.9 hours (n=73, range 0.0-16.8) compared to 3.8 hours (n=49, range 0.2-19.7) for the paper 5150 ($p<0.01$). The results of the secondary in vivo analysis are still pending (estimated date of completion December 2017). Conclusion: Our results demonstrate that the creation of an electronic workflow for initiating an IPH results in significant time savings for provider workflow. End-user feedback on the e5150 system has also highlighted additional benefits to both healthcare providers and the institution, including enhanced legibility and reduced chances of error. Based upon our institution's experience, creation of an electronic workflow for IPH initiation improves provider and institutional workflow. Further study is warranted to directly assess the effects on patient care and to replicate these findings in other settings.

No. 68

Influence of the Major Coping Strategy on the Treatment Adherence and the Severity of Comorbid Conditions in Hemodialysis Patients

Poster Presenter: Hyunchan Hwang, M.D.
Co-Authors: Hyeri Kim, M.D., Doug Hyun Han, Sun Mi Kim, M.D., Ph.D., Jeong Ha Park, M.D., Ph.D., Ji Sun Hong, M.D., M.A.

SUMMARY:

Introduction Coping is defined as a cognitive behavioral effort to control stress made by various conflicts. Coping strategies are related to fitness and many studies have been published about the differences in the coping strategies of patients with cancer, multiple sclerosis, Parkinson's disease, etc. We aimed to investigate the influence of coping strategies on the treatment adherence and the severity of comorbid conditions in hemodialysis (HD) patients. Method Among 83 patients receiving HD at the artificial kidney room of the Chung-Ang University hospital, 51 HD patients were recruited. 2 were excluded because of Alzheimer's disease and 49 patients were enrolled. To measure treatment non-adherence, pre-dialysis serum phosphate levels

(SPL) and the 8-item Morisky medication adherence scale (MMAS-8), were collected. Age-adjusted Charlson's comorbidity index (CCI) was also calculated. Stress coping strategies were assessed using the Korean version of ways of coping questionnaire (K-WCQ) and divided the participants into 4 groups, problem-focused (PF) group, support-seeking (SS) group, hopeful-thinking (HT) group and emotion-focused (EF) group. Result The mean age of the 49 HD participants was 66 years, mean duration of chronic kidney disease (CKD) was 104.3±11.0 months, mean duration of HD was 73.3±9.8 months. 7 participants reported to mainly use PF coping strategy and 12 participants reported to mainly use SS coping strategy. Also, 30 participants reported HT as their main coping strategy. None reported mainly using EF coping strategy. There were no significant differences in age, sex, years of education, etiology of CKD, or duration of CKD among coping groups. Duration of HD was longer in SS group (117.0±99.1 months) than PF group (42.7±40.9) and HT group (64.6±53.5; F(2,46)=3.540, p=.037). Mean MMAS-8 score was higher in PF group (7.2±0.5) than HT group (5.2±2.0; F(2,46)=4.045, p=.024). Mean age-adjusted CCI score was lower in PF group (5.0±1.8) than HT group (7.2±2.1; F(2,46)=4.440, p=.017). There were no significant differences in the number of participants with non-adherence defined by SPL>5.5mmol/l. Discussion CKD requires a lot of social resources when compared to other chronic diseases. SS coping strategy is defined as asking for the support of others to cope with stress. As the HD period lengthens, each participant is thought to change their personal main coping strategy to SS strategy to cope with the need for social resources made by the disease. PF strategy is an active coping strategy that overcomes stress by confronting the problem itself, as opposed to the HT strategy, a passive coping strategy that overcomes stress by keeping distance between the problems and wishing a different situation. Due to the differences between these stress coping strategies, the PF group is thought to more actively participate in treatment than the HT group, and therefore has better treatment adherence and less severe comorbidities.

No. 69

Serious Game for Patients With Obsessive-Compulsive Disorder

Poster Presenter: Doug Hyun Han
Co-Authors: Hyunchan Hwang, M.D., Hyeri Kim, M.D., Sun Mi Kim, M.D., Ph.D., Jeong Ha Park, M.D., Ph.D., Ji Sun Hong, M.D., M.A.

SUMMARY:
Introduction The exposure and response prevention (ERP) is thought to be one of first-line treatments independently or combined with other treatment options for obsessive compulsive disorder (OCD). We hypothesized that serious game, Hit the chicken would improve the clinical symptoms in patients with OCD. In addition, the symptom improvement in patients with OCD would be associated with increased functional connectivity between dorsal anterior cingulate cortex (dACC) and dorsolateral prefrontal cortex (DLPFC) as well as decreased functional connectivity between dACC and basal ganglia in response to game play. Methods Fifteen patients with OCD and age and sex matched healthy control subjects were recruited. At baseline and 3 week follow up, all patients with OCD were asked to complete questionnaires of demographic data, Yale-Brown Obsessive Compulsive Scale (Y-BOCS), Beck Depressive Inventory, and Beck Anxiety Inventory. In addition, all patients were asked to be scanned for assessing functional connectivity of brain using resting state functional magnetic resonance imaging (rs-fMRI) at baseline and 3 week follow up. Patient with OCD were asked to play Hit the chicken at least 30minutes/day and five days/week for 3 weeks. Results At baseline, OCD group showed increased left dACC seed connectivity with right cingulate gyrus, compared to healthy comparison subjects (p[uncorrect]<0.001) as well as increased right dACC seed connectivity with right cingulate gyrus and left superior occipital gyrus (p[uncorrect]<0.001). In addition, OCD group showed decreased right dACC seed connectivity with left superior frontal gyrus (p[uncorrect]<0.001). During 3 week game play, brain connectivity from left dACC seed to right frontal precentral gyrus as well as right dACC seed to left inferior frontal gyrus and right middle frontal gyrus have been increased in OCD group (p[uncorrect]<0.001). In a comparison of changes in brain connectivity during 3 week game play, OCD patients with symptoms improvement showed increased brain connectivity from left dACC seed to right superior frontal gyrus, compared to OCD

patients without symptom improvement (p[uncorrect]<0.001). In addition, OCD patients with symptoms improvement showed decreased brain connectivity from right dACC seed to left lentiform nucleus, compared to OCD patients without symptom improvement (p[uncorrect]<0.001). Controlling BDI and BAI scores, the mean ? values of the right superior frontal gyrus were negatively correlated with the changes of Y-BOCS scores in OCD patients (r=-0.76, p<0.01). Discussion To the best knowledge, current research is first study to assess the clinical symptom and brain change in response to serious game in patients with OCD. Current results suggested that serious game for OCD could improve clinical symptoms including OCD, depressive and anxiety symptoms as well as brain connectivity from dACC to DLPFC and basal ganglia.

No. 70

Haloperidol-Induced Priapism

Poster Presenter: Sumana Goddu, M.D., M.P.H.
Co-Authors: Deepa Anand, Caesa Nagpal, M.D.

SUMMARY:

Background: Priapism can be a side effect of several psychotropic medications. While Trazodone is well known for it, priapism has been described with several typical & atypical antipsychotics, antidepressants, antihypertensives, alcohol and drug use, anticoagulants and rarely with anxiolytics. Various drugs have been implicated in low flow ischemic priapism characterized by abnormalities in the veno-occlusive mechanism. Whereas, high flow priapism typically occurs after trauma to the genitals. Impotence can be a complication due to resulting ischemia. We report a case of a 28 year old male who developed priapism following intramuscular injection of haloperidol. Method (Case Report): Mr. R was a 28 year old Hispanic Male with past psychiatric h/o Bipolar disorder who presented with depression and suicidal ideation with plan by suicide by cop, with concurrent use of Marijuana & Kush. At the psychiatric ER, patient received Seroquel, Depakote & Ativan, before being transferred to the inpatient psychiatric hospital (Harris County Psychiatric Center). He was seen during the night and started on Abilify 15 mg qam & Depakote 500 mg qam & 1000 qhs due to good response during prior admission. Early morning next day, patient got very agitated displaying threatening behavior towards staff. He was emergently medicated with IM Haldol 5 mg + Ativan 2 mg + Benadryl 50 mg at 07:45. He had not yet received any scheduled medications. At 15:42 house officer paged as patient had developed non-ischemic priapism since last 8 hours. Patient was immediately sent out to the ER and received treatment (aspiration of the corpora cavernosa + phenylephrine) Discussion: Priapism can occur soon after starting patients on atypical antipsychotic medication, or in patients who have been on stable doses of psychotropic medication for long periods of time, or after a change in dose or with the addition of another medication, or as idiosyncratic reaction that is not dependent on dose or duration (Sood et al., 2008). Drug-induced priapism results from alpha-adrenergic blockade combined with anticholinergic activity. Alpha-adrenergic agonists (phenylephrine, epinephrine and ephedrine) are used to treat priapism. Andersohn et al found an association between the drug affinities for the alpha-1 receptor of different antipsychotics and their relative propensities for causing priapism. Cloazpine has the highest affinity for alpha-1 adrenergic blockade, followed by Quetiapine, Haloperidol and Loxapine (Compton and Miller, 2001). There have been several case reports of priapism caused by Clozapine, Olanzapine, Risperiodne, Abilify and Ziprasidone Conclusion: Priapism can be a idiosyncratic side effect of typical or atypical antipsychotics. Proposed mechanism is alpha-1 adrenergic blockade.

No. 71

Role of Health Information Technology (HIT) in the Treatment of Mental Illness

Poster Presenter: Sumana Goddu, M.D., M.P.H.

SUMMARY:

Background: Health Information Technology (HIT) has promising applications in Mental Health. The applications range from Electronic Health Records, psychiatry-specific Computerized Provider Order Entry, Clinical Decision Support Systems, therapeutic interventions etc. Therapeutic interventions can be delivered via electronic platforms such as Telepsychiatry, email, instant messaging, internet, blogs, forums, social networks, podcast, computer

games, virtual reality etc. e-Health is an umbrella term encompassing all of the above. Cognitive Behavioral Therapy (CBT) is amenable to be disseminated via technological media. Web-based CBT has an advantage that it is cheaper and less time/labor-intensive than traditional face-to-face CBT. HIT can also bring about primary care and mental health integration. Dr. Thomas Insel proposes some solutions to leverage HIT to advance mental health. For example Big Data analytics in psychiatry, preemptive diagnosis of depression or psychosis by collecting biomarkers like speech patterns, exploring autism biomarkers, and delivery of psychosocial therapeutic interventions via smart phones. In this study, we review the various therapeutic interventions that hold promise for mental health disorders. Method (Literature Review): We searched PubMed using search terms like Health Information Technology (OR) Health Informatics (AND) Mental Health (OR) Psychiatry (AND) treatment (OR) therapy. Our search yielded a total of 96 articles. Of them 50 were retained based on titles. We went through the 50 abstracts and finally retained 18 articles for literature review. A general search yielded 2 additional articles. Discussion: Many of the studies we found were done outside of USA. Several modes of psychotherapies (eg. CBT) can be effectively delivered via electronic platforms such as internet-based, mobile-based and social-media based interventions. The spectrum of mental illness that could benefit from such CBT are depression, anxiety, eating disorders, chronic pain etc. Mobile health (m-Health) platforms are another very useful media with several advantages. VR is another technology that has applications in areas such as PTSD, forensic psychiatry etc. Another huge benefit of HIT based interventions is that they can be disseminated in large scale, at a cheaper price, and can improve accessibility to hard-to-reach populations such as homosexuals, remote areas etc. Telepsychiatry improves access to remote areas and ensures compliance, regularity and continuity of care. Computer Games specifically designed as mental health interventions are successful in cases such as adolescents with behavioral issues and elderly with cognitive issues. Conclusion: Promising HIT solutions (e-health) for mental health include web-based CBT, mobile Health, VR, computer games etc. Till now we have only sought biological and behavioral solutions for mental health disorders. It is time to look at technology as a solution as well.

No. 72

Evaluation of Schizophrenia Patients' Delusional Contents in Associations Between Gender Differences and Life Events

Poster Presenter: Meltem Tasdemir Erinç
Co-Authors: Pinar Cetinay Aydin, Güliz Özgen

SUMMARY:
Background: Gender differences and life events in schizophrenia are one of the most consistently reported issues of the disease. Moreover research suggests that the contents of delusions in schizophrenia are influenced by culture and social environment. Objectives: Examination of a link between content of delusions and gender differences, life events in patients with schizophrenia and detail the background of delusional contents that existing in our society based on our sample group. Methods: A hundred patients diagnosed with schizophrenia according to Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) criteria were included in this study. The content of delusions were compared following the classification system developed by Huber and Gross. Additionally assessment performed via socio-demographic and clinical data collection form, life events scale (B form), brief psychiatric rating scale (BPRS), positive and negative syndrome scale (PANSS). Results: We observed that patients presenting delusions with persecutory content were the most frequent type followed by delusion of reference, delusion of grandiose and delusion of religious respectively. 'Physical/mental injury' was the most frequent persecution and the frequencies of persecutors were family, non-specific person and neighbors respectively. The male patient group had significantly higher number of events correlated with crime and forensic cases than female patient group meanwhile female patient group had higher number of events correlated with family-health. The number of life events, distress and adaptation scores were higher in patients that presenting delusions with reference content. Similarly we reported a significant positive relation between thought broadcasting and distress score mean furthermore negative relation between

religious delusions and distress score mean. Limitations: We have examined limited number of samples with the lack of control group while assessing the life events and we did not use the diagnosis scale. Conclusions: Cultural and socio-demographic factors seem to have a marked influence on the content of delusions in schizophrenia. Correlations between life events and content of delusions provide a valuable clue about defense function and psychodynamics of delusions to cope with stress.

No. 73

Charles-Bonnet Syndrome Complicated by Alcohol Withdrawal in the Setting of Delerium Tremens

Poster Presenter: Milin Balsara

SUMMARY:

Mr D. S. is a 41 yo African American male with a history of alcohol use of about "a gallon of vodka a day" who presented to the emergency room because he was ready to quit drinking "cold turkey." D.S. had, over the past several years, been visiting an ophthalmology specialist at a top US hospital in another state where he had previously resided and been diagnosed with retinitis pigmentosa. He had a central visual field sparing, however his peripheral vision was markedly compromised to the point of being rendered legally blind and was walking with a cane. The visual deterioration occurred within the last decade and only been recently been diagnosed by a top specialist. Mr S. reluctantly admitted that he had been experiencing visual hallucinations, and was admitted to the medical-psychiatric integrative care unit from the emergency room. He reluctantly admitted that over the course of his visual deterioration, he had been seeing snakes. Normally, these snakes were "disgusting" however they had a surreal appearance to them that, upon further investigation, was almost cartoonish in nature. Mr. S. presented to the Med-Psych unit in great distress. He was sweeping and swatting at his legs and chest. The once garish snakes were now not only more real, but tactile. He could feel the snakes crawling on his legs. Mr S. began to aggressively pace the hallways with his cane. He went from nurse to nurse begging for a broom, and habitually stomped his feet and swatted at his legs. In the setting of alcohol withdrawal his baseline hallucinations had taken on a hyper-realistic presentation. It appears that, in the past, Mr S. had never explicated upon these serpentine hallucinations as they were not distressing to him. It was at this time that the treatment team began to investigate the history behind these symptoms and placed a working diagnosis of Charles Bonnet Syndrome. The curious presentation which prompted the patient's seeking help only occurred in the setting of acute alcohol withdrawal in which the visual symptoms became exacerbated, with emergence of tactile hallucinations representing two distinct etiological phenomena namely CB and DT. The patient left AMA and relapsed into habitual alcohol use, however the diagnosis was similarly confirmed in subsequent visits. The patient is still actively seeking ETOH treatment, and continues to attempt, unsuccessfully, to enter into and stay in chemical dependency treatment. The presentation of hallucination exacerbation in the setting of withdrawal continues, and remains a barrier to the patient's continued success in sobriety, and remains refractory to treatment.

No. 74

Longstanding Somatization as a Suspected Prodrome for Late-Onset Schizophrenia

Poster Presenter: Sandy Chan

Co-Authors: Ivan Chik, Barbara Wilson, M.D.

SUMMARY:

Mrs. A, a 58 year old Asian woman with prior medical training and no past psychiatric history presented to the emergency room with persecutory delusions, ideas of reference, paranoia and multiple vague somatic complaints. A review of her past records revealed she had seen several outpatient providers over the last 8 years for ambiguous somatic symptoms which gradually increased in frequency and were similar in theme to her physical complaints when she ultimately presented to the emergency room in acute psychosis. Her visits with multiple providers were complicated by her prior medical training which may have added feasibility and credibility for her symptoms throughout the years. Although some providers had suspected an underlying psychiatric illness, she was never officially diagnosed with a psychiatric disorder or started on neuroleptics since her symptoms had not affected

her personal life. At the ED visit, she believed government spies were trying to poison her through radiation and also thought people she met online were trying to attack her. She attributed these paranoid thoughts as the reason why she was experiencing muscle aches, abdominal pain and frequent headaches. The patient had no history of psychotic symptoms, substance abuse, family history of mental illness, or past psychiatric hospitalizations and was relatively active in her day-to-day activities until her presentation. She was admitted to the psychiatric unit and initial work-up including tests for HIV, TSH, B12, syphilis, drug screen, and head imaging were non-contributory. Given her workup continued to be negative, a primary psychiatric disorder was considered. A differential including schizophrenia, delusional disorder, and dementia was considered. Her presentation was atypical given her age, lack of negative symptoms, and relatively high level of functioning prior to admission. After psychiatric admission, she was stabilized on olanzapine and discharged with outpatient follow-up. The goal of this poster is to provide insight into how late-onset schizophrenia may differ clinically compared to a younger age group – especially among high functioning patients such as this one. We will also highlight key points in ruling out more common causes of psychosis in late adulthood.

No. 75

Celecoxib as Adjunctive Therapy for Schizophrenia in Setting of Elevated C-Reactive Protein

Poster Presenter: Sarah A. Hamilton, M.D.
Co-Author: Hossam Guirgis, M.D.

SUMMARY:

Mr. Z. is a 30-year-old Caucasian male with no known medical history and a past psychiatric history of schizophrenia, stimulant use disorder, cannabis use disorder, and alcohol use disorder. He has a history of lengthy inpatient psychiatric hospitalizations in context of repeated medication noncompliance, substance abuse, and violation of his conditional release from a not guilty by reason of insanity verdict. Previous medication trials have involved dual antipsychotic use with long-acting injectable formulations, mood stabilizing agents, and two incomplete trials of clozapine. Most recently, he was admitted involuntarily for inpatient psychiatric hospitalization due to decompensation as evidenced by severe psychosis, disorganized speech, and bizarre behavior. He was treated with olanzapine and lithium, but due to an overall lack of treatment response, a re-trial of clozapine was considered. A baseline C-reactive protein (CRP) level was collected and found to be elevated without clear symptoms of infection to the best of our knowledge. Due to hypothesized contributory effects of inflammatory markers in the psychopathology of mental illness, celecoxib, a selective COX-2 inhibitor, was started while treatment with olanzapine and lithium continued. With this medication regimen, treatment team observed marked improvement in psychosis, disorganization, and degree of insight. CRP was decreased from 65.40 mg/L to 6.70 mg/L. PANSS score, initially 129 with prominent symptoms in all three scales, was decreased to 10. While caution is advised when attempting to draw direct conclusions from this treatment approach, it is certainly worthwhile to consider alternative adjunctive therapies in treatment-refractory populations due to the debilitating implications of this disorder. This poster will review emerging literature on the role of inflammation in schizophrenia, and discuss the potential of anti-inflammatory augmentation strategies.

No. 76

Patterns of Violence and Aggression at Presentation in Patients With First-Episode Psychosis: Is There a Change Over Time?

Poster Presenter: Sarah Keane, M.D.
Co-Authors: Attila Szigeti, Felicity Fanning, Mary Clarke

SUMMARY:

Background: Research suggests that the prevalence of violent behaviour in the first episode of psychosis (FEP) is greater than during the later stages of the illness. Objectives: To assess the prevalence and clinical correlates of aggression and violence in individuals presenting with FEP to an early intervention psychosis service. To evaluate whether this prevalence has increased in recent years when compared to a similar previous study. Methods: Retrospective cross-sectional study of clinical case notes and database records using a keyword search of a sample of patients with FEP aged between 18

and 65 years presenting from a geographically defined catchment area to a secondary referral psychiatric service over a 4-year period (2010-2013 inclusive). Use of the Modified Overt Aggression Scale to retrospectively assess aggression and violence recorded as occurring in the week prior to, and the week following each patient's presentation with FEP. Results: The overall proportion of individuals in our first episode sample found to be aggressive and violent was similar to the study fifteen years previous. However, a higher percentage of our sample (22%) was violent in the week prior to presentation compared to the prior study (13%). Aggression was independently associated with involuntary admission status (OR=11.31 CI 4.09-31.32) and high activation (OR=4.48 CI 1.81-11.1). Violence was associated with involuntary status and high activation both in the week prior to, and the week following presentation (OR=9.11 CI 3.47-23.86, OR=12.54 CI 2.37-66.41)(OR=2.75 CI 1.06-7.13, OR=25.71, CI 2.93-225.13). Conclusions: Aggression and violence rates in FEP appear relatively stable over time. Keywords: Violence, Aggression, Schizophrenia, First episode psychosis.

No. 77

Development of Schizophrenia in a Patient With Juvenile-Onset OCD

Poster Presenter: Shabber Agha Abbas
Lead Author: Sheema Imran, M.D.
Co-Authors: Avi Siwatch, Asghar Hossain, M.D.

SUMMARY:

Introduction: In a subset of obsessive-compulsive disorder (OCD) patients, schizophrenia co-occurs with the OCD commonly predating the onset of schizophrenia. The implications of comorbid OCD and schizophrenia on long-term treatment management and prognosis are substantial. Objective: The objective of this case report is to report a case of comorbid juvenile-onset OCD and schizophrenia in a 20-year-old patient. Methods: A retrospective chart review was used to study behavioral and cognitive manifestations of a single patient with juvenile-onset OCD with subsequent development of schizophrenia. ? Case: The patient was a 20-year-old Asian male carrying multiple past psychiatric diagnoses including impulse control disorder (ICD), oppositional defiant disorder (ODD), and OCD who was single, unemployed, and living with his mother. Police brought him to Bergen Regional Medical Center for psychiatric evaluation in response to complaints of agitated, aggressive, destructive, and psychotic behavior. He had a history of multiple inpatient psychiatric admissions and a high rate of readmission. The mother reported he caused destruction of property at home, was pacing about the house, was impossible to redirect, and was demonstrating religiously preoccupied behavior. Due to his psychotic behavior and demonstrable threat posed to others he was admitted involuntarily to our short-term care facility unit. No specific trigger was identified for his latest behavior. He denied suicidal and homicidal ideation; denied auditory or visual hallucinations; and denied use of any controlled substances. The patient had been noncompliant with his prior prescribed treatment regimens and this had been well documented during prior hospitalizations. Family history was positive for non-specific anxiety disorder on the side of his biological father. Social history indicated a socially withdrawn individual having poor school grades who was raised by a single mother. Mental status exam was congruent with the clinical presentation. He was superficially cooperative upon interview but guarded and evasive at times. He was diagnosed with schizophrenia, paranoid type, continuous, with history of OCD, ODD, and ICD. In the emergency department he was prescribed risperidone 1 mg QAM, risperidone 2 mg QHS, and risperidone long-acting injectable. During hospitalization we added divalproex sodium 1000 mg QD. He was discharged following stabilization. Discussion and Conclusions: The diagnosis and management of juvenile-onset OCD cases that develop schizophrenia offer unique challenges. Clinicians must be cognizant of the need to treat both conditions aggressively as patient compliance and presence of psychosis may exacerbate treatment success. We suggest that evidence-based guidelines should be developed to provide therapeutic options including combination of pharmacologic and behavioral therapies that solicit family participation and provide adequate symptom resolution.

No. 78

An Atypical Antipsychotic and Benzodiazepine Used to Treat Haloperidol Induced Catatonia: A Case

Study

Poster Presenter: Stephen L. Mecham, D.O.

SUMMARY:

Introduction: Catatonia, a syndrome characterized by abnormal movements, behaviors, and withdrawal, is a condition that is most often seen in mood disorders, but can be also seen in psychotic, medical, neurologic, and other disorders. Most episodes of catatonia can be classified as excited, retarded, or malignant. Symptoms can vary, and recognition and treatment of catatonia can play an important part in both psychiatric and medical treatment as it inhibits treatment, confuses diagnoses, and be potentially fatal if untreated. This case presents a patient who initially presented psychotic, became catatonic after treatment with neuroleptics, with recovery using an atypical neuroleptic and benzodiazepines. Case: ST is a 43 year old male with schizophrenia who presented to the hospital with worsening psychosis and aggression toward his caregivers, his parents. On the medical floor patient was disorganized and agitated with floridly psychotic behavior. Patient had been off of his psychiatric medications, lithium and clozapine. He was restarted on his lithium dose and clozapine was restarted at an initial dose due to being off of it for greater than 3 days. Haloperidol 5 MG IV TID was added for psychosis and agitation. The day after treatment was initiated, patient showed some improvement in agitation and was less psychotic, though there was concern for catatonia. A 2 mg IV ativan challenge was given and the patient became sedated, this was thought to be a failed challenge. That night patient became unresponsive. Psychiatric medications were held for 1 day and patient worsened with waxy flexibility, mutism, posturability, and mitgehen. A 2 mg IV ativan challenge was given and patient responded after 10 minutes. Patient continued to receive ativan and was transferred to inpatient psychiatry. As the dose was increased patient became more interactive, but he was disorganized and aggressive. This was thought to be due to underlying psychosis so olanzapine added at 5 mg BID. While this improved his aggression, it worsened his catatonia. Eventually patient was on 6 mg of ativan TID and 10 mg of olanzapine BID that he began to take consistently orally. He had significant improvement on this dose consistently. He was almost discharged on this dose but had recurrence of his psychotic symptoms. His HS dose of olanzapine was increased to 15 mg. On a week of this dosing patient took pills PO, eat food, perform hygiene tasks, and interactivity with interviewers improved. Discussion: The onset of catatonia in response to haloperidol, the difficulty in treating a patient who is both catatonic and psychotic, and the eventual treatment used draw attention to this case. ECT may have been an option for this patient, possibly with earlier resolution of symptoms, however guardian did not consent for the procedure. A pharmalogic course for treatment remained as an available option, and resolution of catatonia and psychosis with an atypical neuroleptic and benzodiazepines.

No. 79

Factors Contributing to Subjectively Reported Side Effects of Clozapine in Treatment-Resistant Schizophrenia

Poster Presenter: Su Mi Park

Lead Author: Yong Sik Kim

Co-Authors: Hee Yeon Jung, Tak Youn, In Won Chung

SUMMARY:

Background and Aims Clozapine (CZP) has been considered the most effective medication in treatment-resistant schizophrenia, yet reported to produce adverse effects. Subjective experiences of antipsychotic drugs are significantly associated with a number of clinical variables, making it difficult to pin down the direct effects. However, only a few studies focused on subjective side-effects related to CZP treatment. This study aimed to clarify the factors that contribute to subjective side-effects of CZP, including the association between CZP plasma concentrations and subjective side-effects in patients with schizophrenia. Methods Sixty-four schizophrenia patients (DSM-IV) treated with CZP (mean duration; 5.8±4.8 years) were included. The Korean version of Liverpool University Neuroleptic Side Effects Scale (LUNSERS) for patient-reported side-effects and Positive and Negative Syndrome Scale (PANSS) for clinician assessed psychopathology were applied. We investigated the relationship between PANSS factor scores and LUNSERS side-effects —the total score (total-s) for the subjective neuroleptic effects and the red herring score (RH-s)

for items unrelated to neuroleptic effects— using correlation and multiple regression analyses, as well as Haye's mediation model. Results According to multiple regression model, among duration of CZP, the RH-s of LUNSERS, the positive symptom (P-S) of PANSS and the anxiety/depression symptom (A/D-S) of PANSS, only the RH-s of LUNSERS and the A/D-S of PANSS appeared to be significant factors predicting the total-s of LUNSERS. We tested Hayes' mediation and moderated-mediation models to see how psychopathological symptoms, CZP treatment and the degree of over-reporting bias influence the total-s of LUNSERS. Firstly, the P-S of PANSS in the model was put as independent variable and the total-s of LUNSERS as an output variable. A series of mediators was put into model as following order: CZP dose, plasma level of CZP, the A/D-S of PANSS, the RH-s of LUNSERS. As a result, a direct effect of the P-S on LUNSERS did not reach a significant level. Only the indirect effect of the P-S via the RH-s of LUNSERS was found to be significant. Secondly, we tested the model for the effect of the A/D of PANSS on the total-s of LUNSERS using moderated-mediation model. The RH-s of LUSERS was put into the model as a mediator and duration of CZP as moderated-mediator in the way of the A/D-S of PANSS to the RH-s of LUNSERS. As a result, the effect of the A/D-S on the RH upon duration of CZP was significant. But the indirect effect of the A/D-S on the total-s of LUNSERS via the moderated RH-s of LUNSERS was not significant. Rather, the A/D-S has direct effects on the total-s of LUNSERS. Conclusion The A/D-S and over-generalized reporting tendency were found to be key factors associated with subjective side-effects of CZP, independently of the actual CZP concentration level in patients with schizophrenia.

No. 80

Atypical Bridging of Oral Risperidone to Once Monthly Paliperidone Injection in Adolescent With Schizophrenia: A Case Report

Poster Presenter: Suchitra Joshi

SUMMARY:

R.J. is a 15 year old bi-lingual male, who presented to the psychiatric emergency department after running around the streets naked. The patient has a past psychiatric history of schizophrenia with three hospital inpatient admissions this year. Upon admission, RJ was disorganized, paranoid, responding to internal stimuli, tangentially praying in Spanish, and had limited insight. The patient rated a score of six on the clinical global impression severity (CGI-S) on admission. During his previous admissions, potential medical and substance induced causes of psychosis were ruled out. His home medication regimen consisted of risperidone 4mg per day, but severe noncompliance was reported by the patient and parent. He was previously on olanzapine 10mg which was discontinued due to excessive weight gain. Upon this admission, the patient spent seven days on the unit where his risperidone was restarted and optimized to 6mg per day with diphenhydramine 50mg daily. Due to the patient's medication non-compliance issue and failure of two antipsychotics, the team discussed the possibility of initiating the patient on a long-acting antipsychotic. Currently, there are no FDA approved long-acting antipsychotics for the treatment of schizophrenia below 18 years of age. Pope and colleagues reported six case reports of successful transition of adolescents 14 to 17 years old to paliperidone palmitate once monthly (PP1M), however there is limited guidance on bridging and tapering off oral antipsychotic when transitioning to a long-acting in the adolescent population. In collaboration with the outpatient pharmacy, a prior authorization was initiated for PP1M 234mg and 156mg to assess for medication coverage and ensure continuity of care at discharge. At discharge, the patient had markedly improved symptomatology with CGI-S of two and he was able to assist in coordinating his follow-up outpatient care. As an outpatient, RJ received the first dose of PP1M 234mg on day one and oral medications were tapered to risperidone 2mg with diphenhydramine 50mg at bedtime. The second dose of PP1M 156 mg was given on day twelve and oral taper continued with risperidone 1mg and diphenhydramine 50mg daily. The patient returned on day nineteen for follow-up, at which risperidone and diphenhydramine were discontinued. The patient reported mild sedation and no incidence of extrapyramidal symptoms. This case was a successful bridging to PP1M with oral risperidone in an adolescent patient with schizophrenia. The patient continues to do well one month after treatment. He

denies any symptoms of psychosis, and has tolerated the medication with minimal side effects.

No. 81

Dup and Prognosis in Paranoid Schizophrenia

Poster Presenter: Maria teresa Gonzalez-Salvador
Co-Authors: Rosario Gutierrez-Labrador, Pilar Rojano

SUMMARY:

Objective: The aim of the present study is to analyze the relationship between DUP (duration of untreated psychosis) and prognosis in paranoid schizophrenia Methods: It is an analytical observational cross-sectional study. The sample was composed of 52 patients with DSM IV diagnosis of paranoid schizophrenia who were attended at two Outpatient Mental Health Centers of the Community of Madrid. Data collection was conducted through an interview, during whicha sociodemographic questionnaire was applied to the patient, DUP was registered and outcome was measured using the Strauss and Carpenter Prognostic Scale. Lastly, a quantitative statistical analysis was performed between DUP and prognosis. Results: We found no significant differences regarding prognosis between the groups divided into short and long DUP (t=0,97; p=0,369>0,05). Since no criteria has been established to classify DUP into short and long, and in consonance with the latest studies, we established new cut-off to divide DUP: DUP 12 months, without finding any significant differences ((p=0,518>0,05). The correlation between DUP and prognosis was found to be negative (r=-0,173) but non-significant (p=0,254>0,05), being therefore unable to prove any association between them. Conclusion: Our study did not find any association between DUP and prognosis in paranoid schizophrenia.

No. 82

Cannabis Use, Functionality, and Prognosis in Paranoid Schizophrenia

Poster Presenter: Maria teresa Gonzalez-Salvador
Co-Authors: Pilar Rojano, Rosario Gutierrez-Labrador

SUMMARY:

Background: It is unclear if research findings support clinical opinion that cannabis use leads to worse functionality and prognosis in people with paranoid schizophrenia. Our purpose is to test the hypothesis that any regular consume of cannabis before or after the onset of schizophrenia, might deteriorate the functionality and the prognosis in a short-medium amount of time in this illness. Objectives: This study has as a principal objective to analyze the influence of cannabis consume in the functionality and prognosis in a short-medium amount of time in a group of patients with paranoid schizophrenia. As a secondary objetive it has proposed to describe the sociodemografic and clinics variables of the sample. Material and methods: : It is an analytical observational cross-sectional study. A sample of 52 patients with DSM- IVTR diagnosis of paranoid schizophrenia was obtained from consecutively attended at two Outpatient Mental Health Centers of the Community of Madrid. Data collection was conducted through an interview, in which it was applied to the patient a sociodemographic and clinical questionnaires, the PSP scale (Personal Scale and Social Functioning) and Strauss and Carpenter prognostic scale, used in order to measure the Outlook. Lastly, a quantitative and qualitative analysis of the collected statistical variables was performed. Results: patients who did not use cannabis after the first episode of psychosis had PSP scale scores significantly higher (p = 0.042). There was no relationship statistically significant between cannabis use and prognosis. Conclusion: Implementing measures focused on reducing cannabis use and promote early detection systems to avoid cannabis use after the first episode of psychosis could be useful measures to achieve functional recovery in paranoid schizophrenia. Limitations: The main limitation of the study was the relatively small sample size.

No. 83

Insight as Predictor of Functionality in Paranoid Schizophrenia

Poster Presenter: Maria teresa Gonzalez-Salvador
Co-Authors: Pilar Rojano, Rosario Gutierrez-Labrador

SUMMARY:

Insight in schizophrenia patients could be a factor influencing functionality. OBJECTIVES: 1.- To evaluate the functionality of the paranoid schizophrenia in a sample of 52 patients, subsequently treated at three Mental Health Centres from Madrid (Spain).2.- To evaluate insight as a

secondary variable that might intervene as a relevant factor in relation with the functionality of the illness. Material and methods: A cross-sectional design was employed, using validated scales, PSP, to evaluate functionality, SUMD, to evaluate insight, and a clinical and sociodemographic questionnaire. METHOD: Inclusion criteria were: age 18 to 65 years; paranoid schizophrenia DSMIV diagnostic criteria; two to ten years of illness evolution. Exclusion criteria were: to be incapacitated; any impediment that could interfere in the execution of the study. Written informed consent was a necessary requirement to participate. Results: No significant statistical relation between insight and functionality is shown. Conclusion: In order to evaluate the potential of the therapeutic work related to the insight role in the functionality of schizophrenia patients, the sample used should be extended.

No. 84

Paliperidone Palmitate Every Three Months (PP3M) Treatment Compliance and Satisfaction Compared With PP1M in People With Severe Schizophrenia

Poster Presenter: Juan J. Fernandez-Miranda
Co-Author: Sylvia Díaz

SUMMARY:

Background Paliperidone palmitate every three months (PP3M) requires injections only 4 times a year and this is expected to facilitate patient's treatment compliance and satisfaction. This study compares PP3M treatment compliance and satisfaction with PP1M in patients with severe schizophrenia previously stabilized with PP1M for at least 2 years. The effectiveness and tolerability were also measured. Methods 12-month prospective, observational, open-label study of patients with severe schizophrenia (GCI-S>=5 at the beginning of PP1M treatment) treated with PP3M after at least 2 years of stabilization with PP1M (N=42). Treatment satisfaction with PP3M vs PP1M was assessed with the Treatment Satisfaction Questionnaire for Medication (TSQM) and with a visual analogue scale (VAS, 0-10). Effectiveness was measured with number of hospitalization admissions due to psychiatric decompensation and CGI-S. Tolerability assessments included extrapyramidal symptoms, laboratory tests (haematology, biochemistry and prolactin levels), weight, adverse effects reported and injection-site pain or reaction every three months. Other psychiatric medications and also reasons for treatment discontinuation were recorded. Results CGI-S at baseline was 3.9 (0.5), with no significantly changes after 12 months. No patients discontinued PP3M treatment or were referred to hospital psychiatric ward due to decompensation. There were neither significant changes in weight or prolactin levels nor biological parameters alterations, and lower incidence of sedation and orthostatic hypotension was reported. There was an increase in TSQM (from 'satisfied' to 'very satisfied'; $p<0.05$) and VAS (from 7.7(0.9) to 8.6 (0.7); $p<0.01$) between 1M and 3M PP treatment. Reasons reported for higher satisfaction were less injections/year, less sedation and lower feeling of being medicated/ill. No differences were found related to doses (Range: 350-1050 mg/3M). Conclusions Apart from similar effectiveness and somewhat better tolerability, patients with severe schizophrenia lengthy treated with PP1M showed more satisfaction with PP3M. This formulation allows patients not only to improve treatment adherence but also to feel more satisfied with it.

No. 85

High Doses of Second-Generation Long-Acting Antipsychotics in the Treatment of Patients With Severe Resistant Schizophrenia: A 24-Month Follow-Up

Poster Presenter: Juan J. Fernandez-Miranda
Co-Author: Sylvia Díaz

SUMMARY:

Background People with severe schizophrenia treatment compliance is important to reach clinical and rehabilitation goals; and antipsychotics good tolerability at any doses is required for that. The aim of this study is to evaluate treatment retention, effectiveness and tolerability of high doses of second-generation antipsychotic long-acting injectable (LAI) formulations in the treatment of patients with severe (CGI-S of 5 and over) resistant schizophrenia. Methods 24-Mont prospective, observational study of patients with resistant schizophrenia who underwent treatment with 75 mg and over of risperidone long-acting injectable (RLAI) (N=60), 175 mg and over of monthly paliperidone palmitate (PP)(N=30) and 600 mg and over of

aripiprazole once-monthly (AM)(N=10). All of them were previously treated with at least two different antipsychotics with poor outcomes. Assessment included the Clinical Global Impression-Severity (CGI-S), the WHO Disability Assessment Schedule (WHO-DAS) and the Camberwell Assessment of Need (CAN) at the beginning and after three, 12 and 24 months. And also laboratory tests (haematology, biochemistry and prolactin levels), weight , adverse effects reported, other psychopharmacological treatments and reasons for treatment discontinuation. Hospital admissions in the previous two years and during the follow-up were recorded. Results The average doses were: RLAI= 111.2 (9.1) mg/14 days; PP = 228.7 (11.9) mg-eq/28 days; and AM =720 (110) mg/28 days. For all LAIs tolerability was good, decreasing side effects reported and biological parameters alterations compared with previous treatments, in special in AM group. There were no discharges due to side effects with AM, one with PP and three with RLAI.; and three with RLAI and one with PP due to lack of effectiveness. Weight and prolactin levels decrease, but not significantly except for AM. After two years, CGI-S ($p<0.01$), CAN ($p<0.01$) and WHO-DAS in the four areas (self-care $p<0.005$; occupational $p<0.01$; family $p<0.01$; social impairment $p<0.05$) decreased with all injectables. Moreover, there were significantly less hospital admissions than during the previous 24 months: 1.3(1.1) vs. 0.3(0.2) ($p<0.001$), with no differences among injectables. And less antiparkinsonian treatments ($p<0.01$ for PP and AM). Retention in treatment after 24 months was 90% with RLAI, 93,3% with PP and 100% with AM. Conclusions Tolerability of high doses of second generation long acting antipsychotics (RLAI, and in especial for PP and AM) was very good, being useful in improving treatment adherence in patients with severe resistant schizophrenia, and helping this way to get clinical stabilization and better functioning. Low discontinuation rates also support good patient acceptance of an injectable antipsychotic formulation. These patients were clozapine candidates in routine clinical practice, so high doses of second generation LAIs could be a more comfortable and tolerable

No. 86

D-Cycloserine: A Novel Antidepressant to Be Explored?

Poster Presenter: Navjot Kaur Brainch, M.B.B.S.
Co-Author: Sanya Virani, M.D., M.P.H.

SUMMARY:

Navjot Brainch, MBBS; Sanya Virani, MBBS, MPH Background: The shortcomings of existing antidepressants used in patients with treatment resistant depression have evoked much interest in exploring alternate novel yet cost-effective drugs that target N-Methyl D-Aspartate receptors (NMDARs). In addition to ketamine, evidence for the effectiveness of the antituberculosis drug, D-cycloserine (DCS) in this realm has also been steadily accumulating. Observations with DCS have been overlooked in the past in favor of monoamine oxidase inhibitors. DCS acts as a partial agonist at the NMDAR-associated glycine site at low doses and as an antagonist at higher doses. In this review, we present the limited but convincing evidence to suggest the promising antidepressant properties of DCS when administered independently at high dose or as an adjuvant in controlled settings has promising antidepressant properties. Methods: Systematic searches of PubMed, Cochrane, Medline and other sources were conducted to identify trials focusing on the antidepressant effects of DCS. Searches were also conducted for relevant background material regarding its pharmacological function. Results: Results from four double-blinded trials and two open-label studies comprising a total of 84 subjects that had received DCS to date are summarized. Findings from a large double-blinded trial (22 patients) and an open label-pilot study (5 patients), which administered 250mg/day (1) and 100mg of DCS prior to Transcranial Direct Magnetic Stimulation (2) respectively did not reveal statistically significant improvement in the Hamilton Depression Rating Scale (HAMD) and Montgomery-Åsberg Depression Rating Scale (MADRS) scores. A follow-up study (26 patients) to the above trial, administered high doses of DCS (3), gradually titrated to a maximum of 1000mg/day, and showed a significant reduction in depressive symptoms and HAMD and Beck Depression Inventory (BDI) scores in the majority. Another open-label trial that administered intravenous ketamine followed by 8 weeks of adjunctive therapy with pyridoxine and DCS at 1,000 mg/day showed a 60% remission rate in

7 subjects. (4) Additional randomized, doubled-blind, placebo-controlled trials on patients with Obsessive Compulsive Disorder reported that those with comorbid depression showed an improvement in symptoms in favor of DCS post-treatment. (5, 6) Conclusion: All the above studies reported that DCS was safe and well-tolerated and four of them showed a reduction in depressive symptoms without psychomimetic and dissociative effects. In sum, DCS is a cost-effective novel therapy whose antidepressant properties need larger trials to add to the cumulative evidence on its efficacy as an independent drug or an adjuvant. Through this review, we will attempt to tabulate the details of study design, patient population, methods and results of the above-mentioned studies and make recommendations for exploring avenues for research in this area.

No. 87

Is the Concept of Pseudo Neurotic Schizophrenia Still Valid? Case Series

Poster Presenter: Navjot Kaur Brainch, M.B.B.S.
Co-Authors: Yassir Osama Mahgoub, M.D., Penchaya Atiwannapat, M.D., Sanya Virani, M.D., M.P.H.

SUMMARY:

Introduction: Pseudo neurotic schizophrenia was the term coined by Paul Hoch and Philip Polatin in 1940 to describe a subgroup of schizophrenic patient who presented with (disorders of: thinking and association; emotional regulation; sensorimotor and autonomic function) and secondary symptoms (pan-anxiety; pan neurosis; pan sexuality). The term became obsolete in 1980's, after addition of term Borderline Personality disorder in DSM III. Despite the fact that this term is no longer in use, some data argues about its existence and the response to antipsychotic. We present 2 recent cases that matches the diagnosis of pseudo neurotic schizophrenia. Objectives: To increase the awareness of a subgroup of schizophrenic patient who can mistakenly diagnosed with depression, anxiety or personality disorder and highlight the need for careful assessment to overcome challenges in diagnosis and treatment due to symptoms overlap. Methods: PubMed and Google Scholar search using the keywords, "pseudo neurotic schizophrenia" in addition to a summary to 2 recent cases. Case 1: 29-year-old male with history of major depressive disorder, generalized anxiety disorder, borderline personality disorder, and history of multiple suicidal attempts, presented with vague anxiety, and suicidal ideation. He was oddly related, occasionally disconnected with noticeable thought block. He exhibited ambivalence in making decisions and reported confusion about his sexual orientation and preference. History suggested a decline in functioning over the last 11 years. Historically, he was diagnosed with borderline personality disorder with poor response to several antidepressants. He was managed with Quetiapine 300 mg with improvement of anxiety, depression, and suicidal ideation, thought process and socialization skills. Case 2: 39-year old female with previous history of depression and anxiety with no previous hospitalizations, was admitted management of reported paranoia, auditory and visual hallucinations. She appeared anxious and perplexed, her speech was tangential with circumlocution. She provided vague stories related to her life that suggested poor boundaries with strangers, inability to maintain relationship with family of friend's and difficulties keeping jobs. She vaguely reported having suicidal ideation. Personality disorder was initially suspected. Collaterals from family suggested that she was suspicious, paranoid, and odd with poor interpersonal and social functioning. A diagnosis of schizophrenia was formulated and she responded to risperidone 6 mg with improvement in her symptoms. Conclusion: Some schizophrenic patient can present with pan anxiety symptoms that tend to overlap with depression, anxiety disorders and borderline personality. Careful and detailed assessment is key for appropriate diagnosis and treatment as patient might respond favorably to antipsychotics and poorly to antidepressants.

No. 88

Attitude and Preference Toward Treatments of Depression Among General Public in Non-Western Country

Poster Presenter: Ahmad N. Alhadi, M.D.
Co-Authors: Abdulrahman Alkaff, Abdullah Aljumaiah, Faisal Aljabrain, Mohammed Alsubaie, Abdulrahman Alarfaj

SUMMARY:

Background Patients' treatment preference has received a growing interest in the last decade. American Psychiatric Association (APA) has considered the involvement of patients' preference in decision-making as an important part of clinical practice. Objective We aim to assess the preference and attitude toward different types of depression management in Saudi Arabia. Method The study is quantitative observational cross–sectional with a convenient sample who included people who were 18 years old or above in Saudi Arabia and not seeking treatment for depression. The participants read a detailed description of one of the five treatments for depression randomly: (psychotherapy, antidepressants, guided self-help, bibliotherapy, or Internet-based self-help) then were asked to read brief descriptions of all five treatments. Result The total number who completed the questionnaire was 2342 participants. Psychotherapy was the most preferred treatment option 49.2% (N=1154) followed by guided self-help, 16% (N=374). In contrast, antidepressant, and Internet-based self-help were found to be the least preferred types of treatment. These results are similar to a study was done in United Kingdom. Also, females preferred psychotherapy and self-help modalities where males preferred medications. Other socioeconomic factors will be discussed. Conclusion In the future, we recommend conducting a randomized clinical trial study to assess the effect of choosing the preferred type of treatment among the five types of depressant treatments on the depression outcome and why people preferred psychotherapy rather than other types of treatment.

No. 89

Obese Patients With Mood Symptoms Show Greater Food Addiction but Lower BMI: A Mexican Sample of Patients From an Obesity and Weight Control Clinic

Poster Presenter: Alfredo Bernardo Cuellar-Barboza
Co-Authors: Sarai González, Antonio J. Lopez, Dionicio Galarza

SUMMARY:
Background: The association between mood disorders and obesity has been widely examined. Clinical phenomena such as food addiction (FA) may be a link between obesity and mood disorders, as current research suggests. Here we aimed to assess the prevalence of mood disorders and FA in obese and overweight patients; to compare the clinical presentation of patients with mood disorder symptoms (MDS) vs. patients with no mood disorder symptomatology (NMDS). Methods: Participants of a weight loosing program (June to October 2015) from an Obesity and Weight Control Clinic of a University Hospital in Monterrey, Mexico; were assessed using the Patient Health Questionnaire (PHQ-9), the Yale Food Addiction Scale (YFAS), and the Generalized Anxiety Disorder Assessment (GAD-7). Those with positive PHQ-9 scores were further consulted to establish a diagnosis of depression or bipolar disorder using the Mini-international Neuropsychiatric Interview (MINI). Other clinical and demographic variables were assessed in an interview by a senior clinician. Results: 89 patients were included in this study (MDS= 43, NMDS= 45), most of them were female (66.3%), with a mean age of 41.5 (SD = 13.04) and mean BMI of 36.3 (7.5 SD). 48.3% of patients had at least symptoms of mild depression and 41.6% of patients had at least mild symptoms of anxiety; of these, 18% had a major depression diagnosis, 4.5% a bipolar disorder diagnosis and 3.3% had suicide risk by MINI. 34.8% rated positive for FA. MDS patients were significantly more females than the NMDS group (67.4% vs. 65.2%, p=0.049), had significantly lower BMI (34.1 SD 6.3 vs. 38.4 SD 8, p=0.005%). They also showed significantly more food addiction rates (94.7% vs. 5.3%, p=0.000), regular tobacco (94.1% vs. 5.9% p=0.001) and alcohol use (76.2% vs. 23.8% p=0.047). Conclusions: The prevalence of FA, MDS and depression found in this sample is similar to that reported in the literature. However, we found an intriguing lower BMI but higher FA rate in MDS patients vs. NMDs. Limited by sample size, clinical measurements and transversal design, this study contributes to the definition of finer obesity phenotypes related -as biological studies suggest- to lower self control, abnormal reward sensitivity and negative affects, thus exhibiting FA and MDS. Moreover, it helps to distinguish specific treatments for patients suffering from different forms of obesity.

No. 90

Wellness Initiatives in Psychiatry Residency Training: A Four-Program Perspective

Poster Presenter: Pallavi Joshi, D.O., M.A.
Co-Authors: Robert Rymowicz, D.O., Karen Thuy Duong, D.O., Katherine Alexis Jong, M.D.

SUMMARY:
Residency represents a challenging stage of medical training, and concern for the wellbeing of residents and fellows has received significant attention in recent years following a series of widely publicized tragedies. Resident physicians are at high risk for depression and burnout and physicians have an elevated risk of suicide. The National Wellness Institute defines wellness as an active process through which people become aware of, and make choices toward, a more successful existence. Recognizing that wellness is critical to the success of physicians in training, the ACGME and GME committees are implementing personal wellness programs during residency. Generally, such programs combine active and passive initiatives targeting physical, mental, social, and intellectual wellness. To ensure the greatest effect in reducing burnout, training programs and institutions should create wellness programs that intervene at both the individual and organizational levels. While psychiatry residencies have mobilized efforts to implement wellness programs, there is great diversity in their approaches.The authors provide an overview of wellness initiatives in 4 distinct residency programs in 4 states. The goal of this collaborative review is to identify approaches to wellness based on specific training program characteristics and to promote the exchange of ideas regarding wellness initiatives. Northwell Health - Staten Island University Hospital (Staten Island, NY) offers yearly residents' retreat, biweekly class specific support groups, regular interdepartmental social activities, and psychiatric assessment and treatment for residents from all departments. Psychiatry residents participate in SMART-R training and run Balint groups. Online resources include free wellness education modules and questionnaires. Rutgers New Jersey Medical School - (Newark, NJ) offers regular didactics on wellness, spring and winter retreats, and weekly sessions chaired by the resident wellness committee. Available to all residents are catered watercolor and yoga sessions, monthly interdepartmental social activities, free access to state of the art athletic facilities, and free unlimited counseling, substance use treatment, and pharmacotherapy. University of Washington (Seattle, WA) has a resident wellness committee to organize events, including a yearly retreat and weekly business lunch meetings for residents from all classes. The program also offers discounted cost psychotherapy with community providers, and a residency-year specific weekly "T-group". University of Texas Southwestern Medical Center (Dallas, TX) has a resident wellness coordinator and launched a wellness app to easily schedule medical and dental appointments and childcare. The program offers discounted cost psychotherapy for residents, weekly outdoor activities, and residents therapy group. A task force is developing an effective process to help residents and their team debrief after a bad patient outcomes

No. 91
WITHDRAWN

No. 92
Development of Premenstrual Dysphoric Disorder (PMDD) in a Patient With Unreported History of Sexual Assault

Poster Presenter: Lauren Rae Iandoli, M.D.
Co-Authors: Zohaib Majid, Shabber Agha Abbas, Asghar Hossain, M.D.

SUMMARY:
Introduction: Adverse effects of sexually traumatic experiences on psychological, physical, and social well-being are not fully recognized and understood yet. There have been many studies that suggest an association between sexual violence and Premenstrual Dysphoric Disorder (PMDD). Our case report emphasizes the need to probe patients presenting with PMDD for any past history of sexual assault, which may alter treatment regimen decisions. Objective: The objective of this article is to report a case of PMDD that was triggered by a prior sexual assault and unreported by the patient until recently, despite numerous psychiatric hospitalizations for major depressive episodes. Case: This is a 28-year-old Indian female, with a history of multiple psychiatric hospitalizations for Major Depressive Disorder with Psychotic Features, who was brought to Bergen Regional Medical Center by EMS accompanied by her mother for evaluation of worsening anxiety and depressive symptoms in the

context of medication noncompliance. After the patient's previous discharge, she returned to her baseline functional status. However, beginning one month ago, the patient began decompensating and was reportedly feeling increasingly withdrawn, selectively nonverbal, sleeping less, and missing activities of daily living. Two days prior to presentation, she reported onset of her monthly menses that made her nervous, agitated, and restless to the point that she demanded medication to calm herself. According to the mother, the patient's symptoms, specifically her anxiety, menstrual cramping, and dysphoria coinciding with the onset of menses, were reminiscent of symptoms she had endorsed following a traumatic rape by an ex-boyfriend; that assault caused an unwanted pregnancy that had to be terminated. The patient denied any history of post-traumatic stress disorder (PTSD) symptoms or substance abuse. While in the hospital, she was started on Aripiprazole 10 mg PO QD and Paroxetine 10 mg PO QHS. The patient was stabilized and discharged home. Discussion: Review of literature indicates that an unreported history of sexual abuse may be prevalent in some patients presenting with PMDD. In our patient, this indeed was the case. Although the possible etiologies of PMDD are mostly medical, no formal screening mechanism has been devised as of yet to elicit relevant past trauma in patients presenting with new-onset PMDD. Currently, Sertraline, Fluoxetine, and Escitalopram are the first-line treatment choices for PMDD; however, there may be a role of anti-depressive anti-psychotics, such as Aripiprazole, as well as other serotonergic drugs, in select patients presenting with related psychiatric symptomotology. Conclusion: We have observed that eliciting past sexual abuse histories is crucial for the management of PMDD. In our observation, continuing previous psychiatric medications, in patients with new-onset PMDD symptoms, may be beneficial in the context of their comorbid psychiatric symptoms.

No. 93

Poverty as a Cause and Consequence of Mental Health

Poster Presenter: Lawrence Takungo
Lead Author: Rosemarie Caskey, M.D.

SUMMARY:

A 48 years old Caucasian male with a past psychiatric history of recurrent, severe, Major Depressive Disorder was admitted to a state psychiatric facility for suicidal ideation with a plan to blow off his head with a gun. According to the patient, he lives with his mother and is unable to pay his huge financial debts or for his child support. Patient previously was the Director of Operations for a reputed company but, he spent his money carelessly, went into financial crisis, started drinking alcohol, and was terminated from his job six months ago because of his excessive drinking. Financial difficulties could lead to Depression, Generalized Anxiety Disorder (GAD), Substance Abuse, and Hypertension (HTN). Patients who have mental illness could experience financial distress as a result of their condition. In such situations, it might be beneficial if patients could get financial management counseling as counselors could detect patients at the edge of their financial breakdown and refer them to a psychiatrist. This case study addresses the impact caused by personal unsecured debt, job loss or retirement, and financial loss during the recession on mental health.

No. 94

The Invisible Risk of Psychotropic Medications

Poster Presenter: Sureshkumar H. Bhatt, M.D.

SUMMARY:

Understanding the relevance of the QTc interval on the Electrocardiogram (EKG) is an essential part of good psychiatric practice. The Rotterdam Study found that prolongation of the heart-rate corrected QT (QTc) interval increased the risk of sudden cardiac death (SCD) in adult patients by 60%, independent of other known risk factors (Straus et al). QTc prolongation is usually asymptomatic, so treating physicians must be vigilant to monitor EKGs of patients treated with drugs known to cause QTc prolongation. Since many psychotropic medications prolong the QTc, psychiatrists must carefully monitor the EKGs of patients before and during drug therapy. This study examined the EKGs of 107 patients in order to determine the baseline QTc. The EKGs of 107 patients were analyzed, aged 17 to 67 years, chosen at random from our clinic population. 85.04% of the patients were male, and 14.95% were female. EKGs that were reviewed had been performed during non-psychiatry related visits. No

patients were on psychotropic medications when the EKG test was conducted. The QTc interval differs somewhat in men and women. 85.04% of the patients were male, and 14.95% were female. 50.54% of the male patients (n = 46) had a normal QTc interval (less than 430 ms), 50% of the female patients (n = 8) had a normal QTc (less than 450 ms). 18.68% of the male patients (n = 17) had a borderline QTc (431-450 ms), while 37.5% of females had a borderline QTc prolongation (451-470 ms). 30.76% of the male patients (n = 28) had a significantly prolonged QTc (> 450 ms), while 12.5% (n=2) of females demonstrated significant QTc prolongation (> 470 ms in females). This analysis shows that about half of all patients had QTc intervals outside of "normal". The majority of psychiatric medications have a tendency to prolong the QTc. This may also result when psychotropic medications are used in combination with other drugs. Polytherapy is common in psychiatric practice and, if not carefully monitored, can result in an increased risk of sudden death due to QTc prolongation and cardiac dysrhythmia. All patients who are receiving antipsychotics with a high risk of QTc prolongation should be screened for baseline QTc prolongation before initiating therapy. If the QTc prolongation is not correctable, psychiatrists should: 1) select medications with the least effect on the QTc interval; 2) avoid polytherapy if possible; and 3) monitor patient's EKGs closely while they are on therapy.

No. 95

Role of Ketamine in the Modern Era

Poster Presenter: Amindeep Lail, M.D.
Co-Author: Maheen Abbasi, M.D.

SUMMARY:

Suicide is one of the preventable cause of mortality in the United States. Approximately, around one million people worldwide commit suicide annually. Many risk factors could lead to suicide but, the highest prevalence is in the people suffering from mental illnesses like anxiety, depression, psychosis, etc. Recently, the use of ketamine has been an emerging trend in reducing the suicidality. Ketamine is a NMDA receptor antagonist used to induce anesthesia. Currently, it is also used in treating refractory depression and in alleviating suicidality acutely. Randomized control trials have proved that it takes 40 to 120 minutes for the ketamine to show response and the effect last for 10 to 14 days. Though ketamine is effective in reducing suicidality in patients, no clinical test is available to monitor the response. Moreover, there is limited research regarding the standard and maintenance dose of ketamine infusion. Another concern is, as ketamine is an anesthetic, it could be addictive to the patients. With the emergence of ketamine clinics in the United States, we want to express our views regarding the advantages and disadvantages of using ketamine in a clinical setting.

No. 96

Vitamin D Supplementation and Depression: A Systematic Review and Meta-Analysis

Poster Presenter: Marissa A. Flaherty, M.D.
Co-Author: Elliott Gauer, D.O.

SUMMARY:

Context: There has been an association between low vitamin D levels and depression, but it is not well established whether vitamin D supplementation improves depression symptoms. Objective: Perform a systematic review and meta-analysis of randomized controlled clinical trials to determine the effect that vitamin D supplementation has on depressive symptoms in adult patients measured by the Beck Depression Inventory and Hamilton Depression Rating Scale. Data Sources: Electronic databases (PubMed, PsycINFO) were searched in October 2016 for randomized controlled clinical trials with adult samples. Search terms included vitamin D, vitamin D2, vitamin D3, ergocalciferol, cholecalciferol, vitamin D deficiency, vitamin D insufficiency, depression, depressive disorder, and major depressive disorder. Study Selection: Eligible studies were randomized controlled clinical trials of adults that evaluated the effect that vitamin D supplementation had on depressive symptoms measured by the change in standardized depression scales. Studies including children, adolescents or pregnant patients were excluded. Multiple reviewers and consensus strategies were implemented to ensure correct application of the inclusion and exclusion criteria. Five of the fifty-six articles met selection criteria and were included in the quantitative meta-analysis. Data Extraction: Two

reviewers independently extracted data and assessed quality by investigating for sources of bias. Effect sizes were calculated and represented by standardized mean differences. Results: The quantitative meta-analysis showed that vitamin D supplementation improved depressive symptoms measured by standardized depression scales. The overall effect size was medium with an overall standardized mean difference of 0.495 (95% confidence interval 0.190–0.801; p=0.001). There was heterogeneity (?2=21.90; d.f.=6; p=0.001) likely due to the Dean et al. study with a standardized mean difference of -0.152 (95% confidence interval -0.499–0.195).1 Conclusions: This systematic review and meta-analysis shows vitamin D supplementation improves depressive symptoms and may be an important consideration in patients suffering from depression.

No. 97

Untangling Disruptive Mood Dysregulation Disorder From Bipolar Disorder, ADHD and ODD: A Systematic Review

Poster Presenter: Miky Kaushal, M.D.
Co-Authors: Lee Stevens, M.D., Shawn E. McNeil, M.D., Astik Joshi, M.D., Anuj Shukla, M.D., Punyapriya Gopal

SUMMARY:

Objective: Disruptive mood dysregulation disorder (DMDD) is sometimes misdiagnosed as Bipolar disorder, yet the two are clearly distinct. DMDD is a new disorder in the Depressive disorders in the DSM 5. Two key symptoms of DMDD include: frequent, severe, recurrent temper outbursts and a chronic irritable and/or angry mood. Both symptoms must be present for at least one year and cannot be accounted for by other mood disorders. While Bipolar disorder and DMDD are mutually exclusive, research suggests Oppositional Defiant Disorder (ODD) and Attention Deficit Hyperactivity Disorder (ADHD) can each be present with DMDD. The objectives of this review were to clarify the role of ODD and ADHD as symptoms or comorbidity with DMDD, understand behavioral symptoms of children with DMDD who also have either ADHD or ODD and present any new findings that compare DMDD and Bipolar disorder that are not currently in the DSM 5. Method: Articles were searched during July 2017 using PubMed, Medline and PsychINFO databases. The search yielded a total of 53 articles after duplicates were removed. Three articles were excluded (2 case studies and 1 review), thus leaving 51 studies to be screened. These articles were reviewed and considered eligible if they contained “Bipolar, “ADHD”, “ODD” within the abstract. After screening abstracts, 32 papers were found to be potentially relevant, and full article scans revealed 18 papers to meet the objectives of this study. Results: Papers on ADHD and DMDD could be identified into two clusters- those that investigated it as a comorbidity and those that investigated the associated symptoms between the two disorders. New but limited findings found that children with ADHD and DMDD demonstrated lack of self-control and increased bullying behaviors than children with ADHD without DMDD. Overall, findings suggest that DMDD is highly comorbid with ADHD. Majority of studies on ODD could be identified as patients having symptoms that overlap with DMDD. Specifically, studies report low percentages (eg., 3%) of children with psychological problems other than ODD that had DMDD symptoms. The present review also revealed findings that showed distinct history and prognosis patterns between DMDD and Bipolar disorder. DMDD may be associated with parental depression whereas Bipolar disorder correlated with the same illness from parents. Discussion: Behavioral symptoms that result with the interaction of DMDD and ADHD are limited and warrant further investigation. The DSM-5 identifies DMDD with Depressive Disorders, but ODD as a Disruptive, Impulse-Control, and Conduct Disorders. However, the literature shows overlap and lack of clear distinction between the two disorders. Authors from these studies have called for clearer criteria to distinguish the two disorders. Finally, emerging findings continue to further separate DMDD with Bipolar disorder with history and prognosis patterns.

No. 98

Results of Psychopharmacological Treatment of Depression in Patients With Intellectual Disabilities

Poster Presenter: Nicolaas Hendricus Bouman, M.D.

SUMMARY:

Background Evidence for the effectiveness of psychopharmacological drugs in people with

intellectual disabilities is scarce. Several studies showed that the use of these drugs in this population is nonetheless very high1, 2. As a consulting psychiatrist in an institution for people with intellectual disabilities the author is frequently consulted for questions concerning psychopharmacology. Experience after 5 years in this field learned that these questions are complex and that regular psychiatric guidelines are often of limited value. Purpose To assess the results of psychopharmacological treatment of depression in a population of patients with intellectual disabilities. Methods A retrospective chart review of all patients referred for psychiatric consultation between July 2012 and July 2016 was performed. Variables on demographics, level of intellectual functioning, psychiatric diagnoses, present psychopharmacological treatment, and advice of the consultations were gathered. Outcome was determined by the investigator based on the clinical impression during follow-up interviews by the author and rated as Good, Fair, Variable, Unchanged, or Worse. Results In total 615 patients were seen in consultation. Of these,118 patients were diagnosed with depression according to DSM-IV-TR criteria3. Age of depressed patients varied between 11.2 and 73.1 years. Level of intellectual disability varied from serious intellectual disability to average cognitive functioning with 83% in the mild and borderline range (IQ 50-85). Living arrangements were as follows: 45% own home, 24% assisted living facility, 10% long stay ward, 14% open inpatient treatment facility, and 7% crisis unit. 56% of patients had one or more comorbid psychiatric disorders with PTSS (21%) and autism (17%) as the most frequent. At the time of consultation 62% of the patients were using one or more psychopharmacological drugs and 20% an antidepressant. In 44 of the 118 depressed patients an antidepressant was started. These patients were followed up from 2 months up to 3 years although for 11 of the 44 patients (25%) no follow-up was available. The outcome of antidepressant treatment for those patients for whom follow-up was available was as follows: Good 41%, Fair 15%, Variable 18%, Unchanged 15%, and Worse 10%. The outcome in patients without (n=15) versus with (n=12) psychiatric comorbidity was: Good 48% vs 34%, Fair 29% vs 17%, Variable 10% vs 29%, Unchanged 13% vs 9%, and Worse 0% vs 11%. Discussion Psychopharmacological treatment of depression in patients with intellectual disability referred for psychiatric consultation resulted in improvement in approximately half of the patients. These results are comparable to results in non-intellectually disabled populations4. We found that absence of psychiatric comorbidity was related to better outcome. Limitations of this study are that it was a retrospective card review of a selected population without use of standardized instruments.

No. 99

Finding Meaning in the Aftermath of a Lethal Suicide Attempt

Poster Presenter: Ioana Maria Horotan-Enescu, D.O. Co-Authors: Lisa Christine Young, M.D., Maria E. Aguilar, M.D., Enoch Barrios, M.D.

SUMMARY:

Finding Meaning in the Aftermath of a Lethal Suicide Attempt Co-authors Maria Aguliar, M.D., Enoch Barrios M.D., Ioana Horotan-Enescu, D.O., Lisa Young, M.D. Mr.F, a 27 –year-old Hispanic male with a past psychiatric history of chronic suicidal ideation and one previous suicide attempt but no previous documented psychiatric diagnoses. He was admitted to the psychiatric ward following a high lethality suicidal attempt consisting of bilateral wrist laceration, jugular and femoral laceration, while intoxicated, following rejection by a female. Patient underwent comprehensive psychiatric and psychological evaluation, during a two month hospitalization, when it become apparent that patient's chronic suicidal ideations began at an early age and preceded any substance experimentation. Most significant findings during his evaluation were a long history of untreated depression, the limited insight regarding his symptoms and overall psychological components of low self worth and loneliness, with intellectualization and rationalization coping skills and nihilistic thinking related to finding meaning in his life and a specific "plan B" to end his life at age 30 if he could not find a meaningful existence. In this poster, we will discuss the longitudinal and comprehensive treatment modalities Mr.F received, from inpatient acute stabilization to outpatient, the challenges and dilemmas encountered in treating this patient

experiencing existential distress and nihilistic thinking, the difficulty in helping the patient finding meaning in his existence and proposing potential solutions while minimizing practice implications.

No. 100

Differences in the Specific Region of Cerebellum Volume of Patients With Major Depressive Disorder

Poster Presenter: Ji Won Kang
Co-Authors: Min-Soo Lee, M.D., Ph.D., Byung-Joo Ham, Woo-Suk Tae, Aram Kim, Gonju Shim

SUMMARY:
Background: A growing body of evidence has been suggested that morphologic changes in cerebellum may be implicated with pathophysiology of major depressive disorder (MDD). However, there have been no studies investigating structural changes in the specific segmented regions of the cerebellum of patients with MDD. The aim of this study is to investigate a difference in the volume of the specific region of cerebellum between patients with MDD and healthy controls. Methods: A total of 48 patients with MDD and 87 healthy controls participated in this study and underwent T1-weighted structural magnetic resonance imaging. We analyzed volumes of each five cerebellum regions (cerebellum I &II, cerebellum III, cerebellum IV, cerebellum V, cerebellum VI) divided by left and right and the volume of the whole cerebellum from T1-weigted image of participants using the FreeSurfer. One-way analysis of covariance was used to investigate the volume difference of total and specific regions between two groups adjusting for age, gender, education level, HDRS-17 score, duration of illness, and total intracranial cavity volume. Results: We found that the patients with MDD had significantly greater volume in the left cerebellum III region (P = 0.003) compared to healthy controls. No significant volume difference was not observed in other sub-regions of the cerebellum. The volumes of whole cerebellum between patients with MDD and healthy controls did not differ significantly. Conclusion: We observed the region-specific volume difference in cerebellum between the patients with MDD and healthy controls. The results of our study implicate that the information about structural alterations in cerebellum might provide a stepping stone toward an innovative tool to diagnose MDD.

No. 101

Protective and Risk Factors for Occupational Stress Including Temperament-Character and Coping Strategy Among Employees in Charge of Civil Affairs

Poster Presenter: Sun Mi Kim, M.D., Ph.D.
Co-Authors: Hyeri Kim, M.D., Hyunchan Hwang, M.D., Doug Hyun Han, Jeong Ha Park, M.D., Ph.D., Ji Sun Hong, M.D., M.A.

SUMMARY:
Introduction Occupational stress increases socioeconomic burden by reducing productivity and increasing medical use. Previous studies focused on non-personal factors such as type and quantity of work related to occupational stress, and research on the one's temperament, personality, and cognitive-behavioral characteristics was limited. We analyzed the risk and protective factors of occupational stress including the temperament-character and major stress coping strategy among civil servant in charge of civil affairs. Methods The participants were employees of two local public organizations in Seoul. We administered questionnaires including Korean occupational stress scale (KOSS), Temperament and Character Inventory-Revised-Short Version (TCI-RS), Korean version of ways of coping questionnaire (K-WCQ) to 1,413 civil servants. The total of 924 valid responses were divided into the data from civil affair service (CAS) group (N = 604) who met clients for handling civil affairs or the data from Non-CAS group (N = 320) who didn't meet clients themselves. We selected the participants who reports higher occupational stress (HS group: above the 25th percentile of KOSS) and lower occupational stress (LS group: below the 75th percentile of KOSS), in order to find their differences in socio-demographic and psychological characteristics including temperament-character and major coping strategy. Results CAS group was more likely than Non-CAS group to report younger age (p=0.000), married (p=0.010), lower income (p=0.000), lower job grade (p=0.000), shorter duration of work (p=0.000). CAS group was more likely than Non-CAS group to use support-seeking coping strategy (p=0.03). CAS group was more likely than Non-CAS group to report higher KOSS scores (p=0.001). HS group was more likely than LS group to show being female (p=0.028) and in a middle job grade (p=0.008). In analyses for TCI, HS group was

more likely than LS group to report higher scores on Harm Avoidance (p=0.000). LS group was more likely than HS group to report higher scores on Reward Dependence (p=0.000), Persistence (p=0.000), Self-Directedness (p=0.000), and Cooperativeness (p=0.000). In analyses for coping strategies, LS group was more likely than HS group to report higher scores on problem-focused (p=0.000) and support-seeking strategies (p=0.000). Both BDI and BAI scores were greater in HS group , compared to LS group (p=0.000). Discussion The lower-stress group was less likely to avoid risk and more likely to respond sensitively to the feelings of others, endure the same pattern of behavior, have more autonomy to control oneself, and have a sense of unity. They have tendency to use active coping strategies. We can expect the prevention of occupational stress and the improvement of mental health if the individuals who are more suitable for the civil affairs are placed in the work based on the evaluation of the individual's temperament-character and stress coping strategy.

No. 102

Character Strengths as Protective or Risk Factors for Depressive Mood and Suicidality Among Korean Male and Female Employees

Poster Presenter: Hyeri Kim, M.D.
Co-Authors: Hyunchan Hwang, M.D., Doug Hyun Han, Sun Mi Kim, M.D., Ph.D., Jeong Ha Park, M.D., Ph.D., Ji Sun Hong, M.D., M.A.

SUMMARY:
BACKGROUND In positive psychology, recognizing and developing one's signature character strengths is important to promote mental health. However, there have been few studies on the association between character strengths and depressive mood and suicidality. This study evaluated the character strengths as protective or risk factors for depressive mood and suicidality among Korean employees. Methods 267 employees participated in this study. We administered questionnaires including Beck Depression Inventory-II (BDI-II), Korean version of the Mini-International Neuropsychiatric Interview (MINI) suicidality module, 24 Character Strength Alphas VIA Survey-72. A total of 235 valid responses was divided into three groups according to the level of depressive mood: Non-D (BDI-II?13), Mild-D (13

No. 103

A Descriptive Study of Psychiatric Patients With Intellectual and Developmental Disabilities (IDD)

Poster Presenter: Makenzie Elizabeth Hatfield Kresch

SUMMARY:
The Center for Disease Control estimates that 10.8% of the US and 14.7% of the West Virginia population has a diagnosis of Intellectual Disability and Development Disorder (IDD) (1). Although this is a significant portion of the population, literature review revealed few studies examining the psychiatric comorbid diagnoses and associated behavioral disturbances of adult patients with IDD. The only comparable study found was on adults with IDD in the United Kingdom. Results from the UK study found patients with mild-moderate IDD were more likely to have mood or personality disorders compared to severe IDD patients, who were more likely to have autism spectrum disorder, organic disorders, and behavior disorders(2). This study utilized a retrospective chart review of 100 adult patients with IDD in a psychiatric clinic in Huntington, WV. We analyzed demographic and clinical variables including psychiatric comorbidities, current psychiatric symptoms, current and past psychiatric medications, and associated medication side effects, as well as medical diagnoses and social characteristics. Data for the sample was entered into SPSS and examined. The results are presented and discussed, especially as they relate and add to the current known literature.

No. 104

Gender Bias in Mentally Ill Acute Inpatients. Beyond Diagnostic Differences in Short-Stay Mental Patients Admitted in a General Hospital

Poster Presenter: Manuel Delgado, M.D.
Co-Authors: Marta Carmona-Osorio, Carlos González-Juárez, Andrés Suárez-Velázquez

SUMMARY:
Gender bias is a well-known fact in diagnosis and care of mental health disorders. Epidemiological differences are widely mentioned in scientific literature, women having a higher chance to be diagnosed from affective or anxious disorders, and men from substance abuse. Different gender

patterns of help seeking and problem disclosing have also been described. An adequate recognition of different needs and patterns, according to gender, is being suggested in recent years, in order to improve care and wellbeing, at various levels, for both men and women. We study several gender differences and characteristics in a sample including all (N= 236) mentally ill inpatients admitted in a year-period (2016) in a psychiatric ward designed for short-term, acute care. Since shifting diagnoses was one of our main concerns, we retrospectively reviewed histories from all patients in the sample, so far back as available (up to ten years in many cases), depending on duration and onset of illnesses, and date of first contact with our mental health services. Among other differences, we found an overrepresentation of women (54/46 percent; 51/49 in general population), and also a higher number of admissions for females, while mean length of stay was higher for males. The number of diagnoses recorded in history, and changes in diagnosis were also higher in females (thus probably implying a lesser diagnostic stability, which we think should deserve further study). We discuss those and other findings and search for different proposals in order to improve diagnosis, treatment, and prognosis.

No. 105

Family First: Case Study in Early Intervention for First-Episode Psychosis: Impact of Early Family Psychoeducation When Stigma Threatens to Derail Care

Poster Presenter: Mary Duah, D.O.

SUMMARY:

NP is a 19 year old African-American female with no prior formal psychiatric history who initially presented involuntarily via mental hygiene arrest after her mother observed her behavior to be bizarre. On initial presentation NP was catatonic-non verbal and would stand in one position for hours at a time. She refused all PO intake (both solids and liquids) and when symptoms were briefly alleviated by IM Ativan she exhibited signs of responding to internal stimuli and would read aloud from a Bible, uninterruptible by any environmental stimuli. Later in her care the decision was made to start Risperdal. Unfortunately, her mother objected to this approach because of her strong belief that her daughter was possessed by the devil and needed prayer. The mother pressed the patient to refuse Risperdal urging that it was a medication used in "crazy" people with schizophrenia, could result in serious debilitating side effects and even cause her daughter to develop schizophrenic symptoms. The mother however permitted her daughter to only accept Ativan. The patients' team sought an ethics consult and legal course was encouraged if the mothers' actions led to withholding psychiatric treatment necessary to protect life. Thereafter the team determined that the best course of action would be to expedite acute care rather than a lengthy legal process. To do this the team was challenged with helping the patients' mother and family reframe their perception of psychosis in way which removed stigma and made way for much needed treatment. Ultimately the approach taken by the team was to provide family psychoeducation from a basic neurobiological and psychopharmacological angle without challenging the families' religious beliefs or using words like "psychosis", "schizophrenia" or "mental illness". Upon the completion of the family meeting, the patients' family was brought to ease with a fundamental understanding of the disease process their loved one was enduring and consequently allowed treatment to proceed with Risperdal and later Zyprexa as well as continue Ativan. As treatment progressed, there was successful collaboration between the patients' family and the team. After several weeks of inpatient treatment, the patient was discharged and later enrolled in an early psychosis program called OnTrackNY. Her family continues to attend family psychoeducation programs and the patient has successfully returned to achieving her academic ambitions. This case emphasizes the importance of understanding social beliefs and stigma associated with psychotic illnesses and how implementing family psychoeducation as part of the early intervention approach to caring for patients with early episode psychosis, can improve long term outcome for the patient as well as the family.

No. 106

Abrupt Transition of Patients With Serious Mental Illness: Outcomes of Rapid Transition of SMI Patients From Training Program Environment

Poster Presenter: Michael Henri Langley-Degroot,

M.D.
Co-Authors: Lawrence Malak, M.D., Steve Hyun Koh, M.D.

SUMMARY:
Objective: The sudden closure of a county-funded outpatient psychiatric services clinic that has been treating Medicaid patients in San Diego County for over four-decades resulted in a significant interruption in continuity of care for 758 patients with SMI and Co-occurring Disorders. Patients were served by residents as part of their core PGY3 clinical experience. The closure presented an opportunity for naturalistic study on how this loss of care continuity affects patient outcomes. We will evaluate and compare outcomes in the six months pre- and post- clinic closure. Design: A retrospective study on the impact of the clinic closure. Setting: A comprehensive, outpatient psychiatric services clinic funded by the County of San Diego Behavioral Health Services and administered by UC San Diego Health's psychiatry services. Main Outcome Measures: Missed appointments, dropouts, emergency room presentations, inpatient psychiatric admissions, and suicide attempts. Results and Conclusions: To be determined pending analysis of data.

No. 107
Exploring the Role of Youtube in Delivering Psychoeducation to the Chinese-American Community
Poster Presenter: Nikki Lam

SUMMARY:
Objective: Social media is becoming an important communication tool that can bridge the gap between health care and ethnic minorities over cultural and language barriers. Our study explores the role of YouTube in delivering schizophrenia education to Chinese American immigrants. Methods: Three psychoeducational YouTube videos related to schizophrenia were uploaded. Data from each video were collected for the year of 2016 (a 12-month period), and results were analyzed using descriptive statistics. Results: The three videos recorded 4935 views with a total viewing time of 35,614 minutes. The video regarding first-episode psychosis had the most number of views and shares, and the longest total watch time and average view duration. The targeted age group (<34 years old) comprised about half of the views for each video. Viewers of the first-episode psychosis video who were between 25 and 34 years old had a longer average view duration compared to the overall average. YouTube suggested videos were the most common traffic source (81.4%) compared to YouTube search and direct links. Conclusion: YouTube is an attractive format for disseminating schizophrenia educational contents to younger Chinese-speaking immigrants. It can also be an avenue for alleviating negative stigma regarding schizophrenia and other mental health issues among Chinese immigrants.

No. 108
Assessing a Cost-Effective Approach to Increasing Discussions About Medication Adherence in an Outpatient Psychiatric Setting
Poster Presenter: Otega T. Edukuye, M.D.
Co-Author: Christopher R. Smith, M.D.

SUMMARY:
In psychiatry, poor adherence accounts for a large portion of all medication-related hospital admissions and influences disease progression, death rates, and health care costs. In light of these growing issues, the necessity for assessing patients for adherence is evident. A preliminary literature review of existing interventions and screening measures for medication adherence in outpatient mental health facilities was conducted. This review yielded studies related to interventions utilizing more automated and often costly interventions (e.g., electronic monitoring), with very few comparative studies of less costly interventions. Efforts that aim to increase the likelihood of proactive screening of patients by prescribing clinicians has significant patient safety and quality improvement implications. Studies have shown that clinician-patient alliance and communication are associated with more favorable patient adherence. Motivational interviewing is a low cost intervention for increasing therapeutic alliance. This project aims to encourage discussions about medication adherence during medication reconciliation at routine medication management appointments in a large, urban public hospital. The improvement initiative included an informative webinar on using motivational interviewing to

improve medication adherence that was made available on demand as asynchronous learning. In addition, reminder cards of helpful interview question probes were given to all prescribers in the clinic. Prescribers were invited to complete a survey to assess knowledge about adherence, comfort with engaging patients to assess adherence, and self-reported practice change. Survey results are presented with comparative analysis of providers who viewed the webinar versus those who did not. These results may be useful to other practices seeking to improve clinical outcomes by increasing medication adherence.

No. 109

Impact of the Deepwater Horizon Oil Spill on Adult Alcohol Use and Posttraumatic Stress Symptoms

Poster Presenter: Robert Marcus Fuchs
Co-Author: Joy Osofsky, Ph.D.

SUMMARY:

Background: The Deepwater Horizon Oil Spill of 2010 had a devastating impact on residents of southeastern Louisiana. Individuals affected by this technological disaster experienced challenges related to physical injury, emotional strain, and financial burden. The medical conditions acquired secondary to this disaster have been described previously, revealing that a number of acute and chronic conditions were developed by those directly or indirectly exposed to contaminated water. However, the chronic psychiatric sequelae of exposure to the Deepwater spill, such as posttraumatic stress disorder (PTSD) and increased substance use, have not been satisfactorily investigated. Existing literature indicates that PTSD and anxiety both increase following technological disaster (as in those whose lives were affected by the 1989 Exxon Valdez oil spill) one year after the exposure, but little is known about changes to substance use (Solomon et al. 2010; Palinkas et al. 1993). Based on this background, an investigation into the psychological outcomes of victims of the Deepwater Horizon Oil Spill is highly prudent to improving community treatment of psychiatric illness in the Southeastern United States. Methods: To enable study of our unique population, the Department of Psychiatry at Louisiana State University Health Sciences Center developed and administered a survey entitled the "Deepwater Horizon Event Psychosocial Needs Assessment". This survey was administered to 300 adults (at least 18 years of age) within the New Orleans metropolitan area. This method of interview provided valuable self-reported data across a wide variety of psychosocial items, including emotional burden (e.g. anger, loneliness, and financial strain), physical and psychosomatic symptoms (e.g. headache), and substance use. Critically, this survey collected information about the magnitude of exposure to the disaster, and asked participants to report changes in emotional state both before and after exposure to the oil spill. These features of our survey facilitate interpretation of how the degree of disaster exposure causes psychiatric and psychological dysfunction. Results: We will use SPSS to generate logistic and multiple regressions based on magnitude of disaster exposure. This approach will allow us to test the hypothesis that individuals highly affected by the oil spill develop higher levels of PTSD-like symptoms (e.g., anxiety) and substance use. The findings of this study will reveal how this type of technological disaster can affect regional communities, in turn providing crucial information to trauma-oriented health services and organizations about the value of long-term psychiatric follow up for disaster victims.

No. 110

Refugee Health and Wellness: Sharing Our Success With Medical Student-Run Refugee Health Fairs

Poster Presenter: Sally Huang
Co-Author: Sophia Banu, M.D.

SUMMARY:

Purpose: Each year, medical students at Baylor College of Medicine (BCM) in Houston, Texas, organize a refugee health fair to promote refugee health and wellness in partnership with the Alliance for Multicultural Community Services (AMCS), a local refugee resettlement agency. Refugees face significant barriers in language acquisition, employment, transportation, and access to medical and mental health services upon arrival in their new home; previous trauma can further exacerbate the stress naturally induced by the resettlement process. These fairs empower refugees to take control of their own health by establishing a medical home as

an important part of the resettlement process. Medical students organize this student-run fair with mentorship by BCM psychiatry faculty, and we offer our experiences as a replicable model for other medical students and healthcare professionals interested in refugee or public health. Methods: A committee of medical students organized two refugee health fairs in the 2016-2017 academic year, supported by the TMAF Medical Student Community Leadership Grant and BCM. Committee tasks included recruiting volunteers and translators; communicating with students and faculty from other medical, dental, pharmacy, optometry schools, and universities in the Texas Medical Center, as well as AMCS; forming partnerships with community organizations; and coordinating logistics on the day of the event. We held two volunteer trainings before each fair, paying particular attention to issues unique to the refugee population. Results: Over 300 clients were seen at the two fairs. At each fair, more than 120 volunteers provided over 6000 free mental health, medical, dental, and ophthalmological preventative screening services; educated refugees about preventative health; and connected clients with resources in the Houston area. Case managers from AMCS and community members provided critical translation services for clients who attended. Student and faculty volunteers came from seven undergraduate and professional institutions in the Texas Medical Center. Local clinics and organizations like the Center for International Trauma Survivors, Texas Children's Hospital Mobile Vaccine Clinic, Houston Food Bank, and the Houston Area Women's Center, amongst others, were present to connect with clients and offer their services. Conclusion: These health fairs are often points of first contact between the client and mental health or medical services beyond their initial arrival health screen. Our experience demonstrates that medical students can play an important role in helping refugees establish a medical home in the often-chaotic resettlement process, and this inter-institutional approach indicates significant interest in refugee health among professional students, as the experience is both professionally enriching for us as we gain experience working with large, multinational populations, and beneficial for the clients whom we serve.

No. 111

Readmission Reduction Strategies at a Regional Academic Medical Center

Poster Presenter: Seema Sannesy, M.D.

SUMMARY:

Repeated psychiatric hospitalization, primarily for those with serious mental illness, continues to be a problem nationally. While much focus has been given to finding the balance between length of stay (LOS) and 30-day readmission rate, the factors that influence readmission rates appear to be multiple. Identifiable reasons for psychiatric readmission include, but are not limited to, history of previous admission, premature discharge, inadequate transition support services after discharge, nonadherence with aftercare and/or medications, or simply discharge plan failure. In efforts to reduce 30-day inpatient psychiatric readmissions a regional academic medical center in New York State's Hudson Valley has employed a number of strategies. Integral to this initiative has been joining the Readmissions Quality Collaborative (RQC) sponsored by the NYS Office of Mental Health, the Healthcare Association of NYS, and the Greater NY Hospital Association, along with formation of a multidisciplinary Behavioral Health Readmissions Reduction Committee within the medical center. Baseline data analysis of readmissions included the examined variables of LOS, reason for readmission, discharge referral, and whether initial aftercare appointment was kept. Quarterly analyses have been completed as various readmission reduction strategies were employed over time. These strategies thus far have included introduction of a readmission risk assessment form to be completed at the time of intake, Psychiatric Services and Clinical Knowledge Enhancement System (PSYCKES) access for clinicians, warm handoffs prior to discharge, bedside prescription delivery, a single organized folder provided to patients at the time of discharge containing discharge and aftercare instructions, an outlined readmission reduction plan as part of discharge documentation, post discharge follow-up calls to patients and outreach calls to aftercare providers, and introduction of a social worker/care manager in the psychiatric emergency department setting to facilitate short-term alternatives to

psychiatric hospitalization. These strategies are presented and evaluated with regards to their effects on quarterly data analysis of readmission rates, along with specific barriers noted.

No. 112

Mass Psychogenic Illness in a School Following an Anniversary Day of Mega Earthquake in Nepal

Poster Presenter: Hitekshya Nepal, M.D.

SUMMARY:

Background: Mass psychogenic illness (MPI) is defined as the manifestation of organic symptoms without a defined cause in a group of people who share similar beliefs about the underlying cause of the symptoms. Despite being rare, it usually gathers great attention in media and public health outputs. Also, it poses a significant health and social impact, through its association with social stigma. This study was conducted in a rural school in Nepal to investigate the symptoms of MPI following the mega-earthquake in 2015. Methods: In 2015, a mega earthquake hit Nepal. One year later, a student X (index case) fainted in class followed by 37 other students who had witnessed the index case, on the anniversary day of the earthquake. All students were followed up for 12 weeks to assess their symptomatology and study the risk factors. Results: A total of 38 female students of age groups 12-16 who showed the symptoms consistent to conversion disorder. Majority (86.5%) of students belonged to poor socioeconomic and illiterate families. Social belief about being possessed by evil spirit behind the school was proposed as cause of this abnormal behavior by the previously well children. The study also revealed earthquake related stress being the major precipitating factor due to the fact that this incident occurred following day of anniversary of mega earthquake. Almost all the girls had lost either one or more family member, house, domestic animals and other property during earthquake. Psycho-education and psychotherapy was the main stay of treatment. Intervention was done at both individual and community level. Parents, school teachers and key stakeholders of the community were educated regarding the nature, cause, symptoms and management of illness. During 6 weeks follow up, only 2 cases were reported to have symptoms of conversion disorder. Stress regarding the homework and poor school performance was identified on both girls. Intervention was done accordingly and 12 weeks follow up reveled symptoms free to all students. Conclusion: MPI is mostly prevailed in developing countries and management of this condition should be done in accordance with socio-cultural context. Our aim is to make physicians aware on the diverse presentation of MPI and make local resources available even in rural communities where such conditions are more prevalent.

No. 113

Hypothyroidism Masquerading as Psychosis: An Unusual Presentation in a 14-Year-Old Boy

Poster Presenter: Hitekshya Nepal, M.D.

SUMMARY:

It is a well known fact that thyroid hormone is essential for growth and development in children. Deficiency of the hormone produces multi systemic effects. The varied manifestation could be from global developmental abnormalities to acute metabolic derangement which vary according to age as well. Psychiatric manifestation could vary from cognitive dysfunction, mild attentional impairment to affective disorders, agitated delirium and psychosis. We present an unusual case of hypothyroidism in a 14 years old boy who presented with the complaint of hearing voices like a radio talking for three weeks. This was not heard by other people around him. He then developed sleep disturbance, inability to concentrate and progressive agitation. On exam, vital signs was temperature of 97.7°F (36.5°C), a pulse of 60 beats/min, and blood pressure of 100/76 mm Hg. Physical exam revealed short stature, dry skin, reduced pubic hair, and gynaecomastia. His heart and lung examinations were unremarkable. He had a normal-size thyroid gland. His neurologic examination was normal strength in all extremities with a significant delay in the relaxation phase of the deep tendon reflexes. He was alert and oriented but with notable auditory hallucinations during the examination. Investigation revealed markedly increase thyroid stimulating hormone (TSH) 98.4 μU/mL (reference range: 0.50–5.00 μU/mL) and thyroxine (T4) level of less than 1.0 μg/dL (reference range: 4.5–10.9 μg/dL), and total triiodothyronine (T3) level of 24 ng/dL (reference

range: 60–181 ng/dL) and positive thyroid autoantibody test. Substance use was ruled out. Thyroid replacement treatment (thyroxin) was initiated with a low dose of Risperidone. Significant improvement in symptoms including auditory hallucination was observed in 2 weeks period and he was asymptomatic in 4 weeks. The Risperidone was gradually stopped with complete resolution of hallucination. TSH was dramatically decreased over 4 weeks. Repeat thyroid function test at 8 weeks was within normal limits. The case illustrates the importance of thyroid function test as a routine part of psychiatric assessment in child and adolescent psychiatry. And to consider hypothyroidism for new onset psychosis. This could help to identify and manage such cases at the earliest. This would ultimately prevent associated morbidity and mortality.

No. 114

A Case Presentation of Late Diagnosis of Schizophrenia and Discussion of the Literature of Schizophrenia in the Older Adult Population

Poster Presenter: Albert Nguyen, D.O.
Co-Author: Shane Verhoef

SUMMARY:
With epidemiological studies showing that onset of psychotic symptoms and diagnosis occur usually during early adolescence and early adult life, a diagnosis of schizophrenia made later in life is less common. Additionally, the diagnosis may be complicated by the presenting psychotic symptoms being obscured in the older adult population due to multiple comorbidities associated with advancing age. Hence, there is a broad differential when psychotic symptoms (paranoia, hallucinations, delusions) present later in life that include delirium, psychosis related to neurodegenerative diseases, psychosis due to general or medical condition, mood disorder with psychotic features, substance induced psychosis, delusional disorder, and schizophrenia spectrum disorder. Primary work up of psychosis in the older adult population and elderly generally focuses on a comprehensive medical evaluation to rule out underlying organic pathology. This poster will present a case of a diagnosis of schizophrenia made later in life in a 60 year old high functioning older gentleman who was admitted to the geriatric inpatient psychiatry unit for bizarre behavior, auditory hallucinations, paranoia, and disorganized speech and thinking. He underwent a medical work up for acute psychotic symptoms and altered mental status that was predominantly negative. This case will help illuminate the importance of recognizing that late presentation of schizophrenia is more common and prevalent than typically believed, and should be an important differential diagnosis. This case will also help facilitate discussion and review the literature concerning epidemiology, clinical presentation, risk factors, and diagnosis in later life schizophrenia and late onset and very late onset schizophrenia.

No. 115

Maintenance rTMS in a Multiple Sclerosis Patient With Resistant Depression: A Case Report

Poster Presenter: Yamini Samy
Co-Authors: Antony Fernandez, M.D., Chinna Samy

SUMMARY:
Multiple sclerosis (MS) is a disabling neurological disorder presenting a variety of symptoms which are hard to control by actual drug regimens. Non-invasive brain stimulation techniques such as rTMS have been investigated in past years for the improvement of several neurologic and psychiatric disorders. Major depression a common co-morbid condition in MS could modify the outcome of treatment of both MS and depression. We describe the application of transcranial magnetic stimulation (rTMS) in an MS patient with resistant depression. The patient was treated with rTMS and continued on maintenance rTMS treatments on follow up. Clinical outcome measures on HAM-D, BDI and QOL at baseline and on follow up demonstrate that improvement was sustained during follow up. Neuroimaging data showing evidence of relapsing and remitting MS will be displayed. The durability of TMS' antidepressant benefit and safety and tolerability profile make it an attractive treatment option for selected patients. Although TMS is labor intensive compared with medications, its efficacy, safety, and tolerability for depression and comorbid neuropsychiatric disorders are driving additional research to refine and improve its therapeutic appeal.

No. 116

Neuropsychiatric Manifestation in a Patient With Panhypopituitarism

Poster Presenter: Oluwole Jegede, M.D.
Co-Authors: Ayodeji Jolayemi, M.D., Mario Gustave, M.D., Heela Azizi

SUMMARY:

Introduction: The pathophysiologic presentation of panhypopituitarism is well documented but there is a paucity of data on its possible associated neuropsychiatric manifestations. Cases described in literature involve psychotic presentations following panhypopituitarism from various etiologies including an ectopic posterior pituitary, Russell Viper Bite, Sheehan's syndrome, Traumatic Brain Injury (TBI), and after glucocorticoid therapy. Case Presentation: We present a case of an incidental diagnosis of panhypopituitarism in a 68-year-old African American man admitted to our psychiatric inpatient unit with symptoms diagnostic of schizophrenia. The case was unusual as a first-episode psychosis given the patient's age, in the absence of any known psychiatric history. In the course of his admission, the patient's clinical condition deteriorated culminating in a sudden altered mental status which prompted a transfer to the medical floors and further investigations. A head CT scan and a pituitary MRI revealed a near total resection of the pituitary while laboratory investigations revealed hyponatremia and a grossly low hormone profile. The progression of these events casts doubts on our admitting diagnosis as the primary cause of the patient's symptoms. The patient's clinical condition improved only when his endocrinopathy was treated with hormone replacement, fluids, and electrolyte correction in addition to antipsychotics. An inability to verify the patient's psychiatric history and a remote history of pituitary resection several decades earlier, unknown to the treating team, added to the diagnostic conundrum. We revised the diagnosis to neuropsychiatric manifestations secondary to an organic brain syndrome due to a partial pituitary resection. The patient was discharged with no symptoms of psychosis, good insight, judgment, and good reality testing. Discussion: Mechanisms for the pathogenesis of psychosis in hypopituitarism may be a result of interactions between pituitary hormones and the dominant neurotransmitters: serotonin, dopamine, GABA, and glutamate and a complex metabolic and electrolyte changes in the central nervous system resulting from a combination of hypothyroidism, hypoglycemia, and low cortisol. The etiology of psychosis in our patient is difficult to ascertain for two main reasons: one, our inability to obtain a comprehensive psychiatric and medical history on admission, and two, the relatively late onset of psychosis and his history of being symptom-free for so many years following the pituitary resection. These factors make it problematic to rule out an underlying psychotic disorder; however, it is of clinical significance that, once we added hormone supplementation to the patient's medication regimen, the patient made remarkable clinical progress.

No. 117

The Psychiatrist Who Forgot Who He Was: A Case of Posttraumatic Autobiographical Memory Loss With Structurally Intact Hippocampus

Poster Presenter: Oluwole Jegede, M.D.
Co-Authors: Carol Lim, M.D., M.P.H., Olawale Ojo, M.D., Ayotomide E. Oyelakin, M.D., M.P.H., Alexa B. Kahn, Sherina Langdon, Justin Jonghyun Shin, Priya Mukhopadhyay, Devashree Parmar, Ruby Sangha, Ayodeji Jolayemi, M.D.

SUMMARY:

Introduction: The famous case of Henry Molaison has been pivotal to understanding the human brain and has provided important scientific framework for the organization and distribution of memory functions as well as theories involving memory consolidation, storage, and retrieval. Here we present a similar case observed on our inpatient unit of a patient who reported to be a psychiatrist, with similar patterns of memory loss but without any structural hippocampal changes. Case Summary: This is the case of a 44-year-old man, who claims to be a psychiatrist, the patient demonstrated anterograde and retrograde amnesia following a motor vehicle accident but his general semantic memory appears preserved. The patient also lost his personal autobiographical memory including his native language, but with a retention of his secondary language, English. Interestingly, the patient demonstrated an intact and extensive knowledge of

psychiatric principles and practice as well as a profound fund of medical knowledge. The patient's pattern of memory loss closely resembles that of the famous case of Henry Molaison, who was the basis for the Hippocampal theory of Memory storage. Henry Molaison underwent bilateral medial temporal lobe resection and had complete loss of memory of events subsequent to the surgery and a partial retrograde amnesia in the absence of changes in personality or semantic knowledge. To the best of our knowledge, this is the first reported case of a patient with the similar pattern of memory loss as Henry Molaison, yet without any history of neurosurgery or any structural or anatomical lesion on CT and MRI. Discussion: This case is unique as it demonstrates a similar pattern of memory loss as the famous case of Henry Molaison in the absence of any evidence of lobectomy of medial temporal lobes. Henry Molaison demonstrated extensive damage to the entorhinal and perirhinal cortices accompanying the severe impairment of autobiographical memory. We suggest a possible model of hippocampal neural networks, demonstrating inhibition of neurons which may account for the memory loss, even without any gross neural damage. Such a model of neural network model is based on the hippocampus acting at an integration center, during the process of learning and retrieving polymodal information of two cortical pathways coding for individual stimuli assemblages and abstract entities. This concept of inhibition has been observed in prior experiments on the dentate gyrus of the hippocampus, and may explain the patient's autobiographical memory loss while maintaining intact and impressive fund of medical knowledge.

No. 118

Activation of Symptom Dimensions in Obsessive-Compulsive Disorder During Working Memory and Sustained Attention

Poster Presenter: Ella Hong, M.D.

SUMMARY:

Obsessive–compulsive disorder (OCD) exhibits heterogeneous symptoms and are noted to have a broad range of comorbid disorders. The Dimensional Yale–Brown Obsessive–Compulsive Scale (DY-BOCS) was introduced as a clinical metric for assessing the presence and severity of six specific OC symptom dimensions that combine thematically related obsessions and compulsions. The current study aims to explore the six symptomatic dimensions of DYBOCS as predictions of fMRI estimated activation in OCD using both an n-back paradigm (for working memory) and Continuous Performance Task (for sustained attention) to assess whether activation profiles are predicted by symptom clusters.

No. 119

New-Onset Behavioral Changes and Visual Disturbance: A Case Study and Discussion

Poster Presenter: Jamon Aaron Holzhouser, M.D.

SUMMARY:

30 year old male member of the USMC with a history of a combat deployment, previous contact with behavioral health for unspecified depression and anxiety, and ongoing marital problems, who was referred to the partial hospitalization program at Walter Reed from his outpatient provider in Guantanamo Bay, Cuba for increasing suicidal and homicidal thoughts which frequently were precipitated by some benign interpersonal interaction or minor aggravation. Although he denied active suicidality, he had a persistent wish to die. His mood disturbance and suicidality were largely refractory to pharmacological and psychotherapy. After approximately two weeks, he revealed that for the preceding month, he had been experiencing diplopia intermittently, for about five minutes, which would then spontaneously resolve. He was referred to ophthalmology to evaluate his diplopia, and after confirming it, ordered an MRI. This revealed an 8 cm Left Temporal and Left Frontal lobe mass which was causing uncal and subfalcine herniation. He was admitted to the hospital immediately and eventually received a biopsy and ultimately 95% resection of what was determined to be a glioblastoma. After the resection he underwent radiation treatment. Interestingly, his neurological symptoms remained initially unchanged until ultimately his CNIV lesion began to resolve. However, his psychiatric symptoms remained unchanged. He continues to have suicidal and homicidal ideation routinely, and in response to minimal provocation. He most recently reported thoughts of murdering his wife and child before taking his own life.

No. 120
WITHDRAWN

No. 121
Parkinson's Disease, Cognition, and Language
Poster Presenter: Maria Kralova

SUMMARY:
Cognitive disorders – mild cognitive impairment (MCI) and dementia – are of the most prevalent nonmotoric features of Parkinson's disease (PD). MCI patients with Parkinson's disease develop dementia approximately six times more often than the age-matched PD patients without MCI. The prevalence of dementia after 15-20 years duration of PD is relatively high, so the current research is focused on identification of any early markers of cognitive disturbances, which can potentially progress to dementia. We offer the first results of our research, focused on the analysis of cognitive-communication disturbances in Parkinson's disease. This poster presents the prevalence of cognitive disorders in the sample of PD patients, characteristics and profiles of cognitive disturbance in PD, the relationship between cognitive decline and verbal-language abilities and besides evaluation of so called "cold cognition" also the disturbances of social cognition in PD.

No. 122
Mediagenic Psychosis in Dementia: A Case Report
Poster Presenter: Noha Mohamed Rady Abdel Gawad, M.D.
Lead Author: Garima Arora, M.D., M.S.

SUMMARY:
We present the case of a 90 year old male patient, with Alzheimer's dementia and normal pressure hydrocephalus (NPH) who exhibited new onset delusional pseudotranssexualism in the context of mediagenic psychosis. 'Mediagenic psychosis' refers to the incorporation of emotionally laden stressful news items from the media into patients' delusional systems [1, 2]. The emergence of the patient's delusional beliefs coincided with the airing of a popular television show portraying a transsexual celebrity.Commonly reported delusional content in dementia includes paranoid delusions, delusions of persecution, theft, and infidelity [3]; and less common are delusions of erotomania [4] and delusions of pregnancy [5]. Delusional pseudotranssexualism has been reported in schizophrenia[6] but to our knowledge, it has not yet been reported in dementia. This lends further evidence to the role of concurrent sociocultural and political issues in shaping delusional thought content in psychosis.

No. 123
Serum Complement C3 Mediates Education's Effect on Cognition
Poster Presenter: Safa Rubaye, M.D.

SUMMARY:
Background: The latent variable "d" (for "dementia") appears to be uniquely responsible for the dementing aspects of cognitive impairment (Gavett el al., 2015). Age, depression, and the apolipoprotein E (APOE) e4 allele are independently associated with d (Royall et al., 2013). On the other hand, education, especially in young age, plays a role in lowering the risk of dementia including Alzheimer's Disease (AD) (Meng et al, 2012; Basu 2013). In this analysis, we combine SEM (Structural Equation Model) with longitudinal data from the Texas Alzheimer's Research and Care Consortium (TARCC) to explore Complement C3 as a possible biomarker of education's specific effect on d. Participants and Method: We employed structural equation models (SEM) to examine the mediation effect of S100b on depression's association with d in a well characterized cohort, the Texas Alzheimer's Research and Care Consortium (TARCC). Subjects included n= 3385 TARCC participants [1240 cases of Alzheimer's Disease, 688 "Mild Cognitive Impairment "(MCI) cases, and 1384 normal controls (NC)]. Serum biomarkers levels were determined at baseline by Luminex assay (Rules Based Medicine /Austin, TX). All observed measures were adjusted for depression, ethnicity, gender, Geriatric Depression Scale (GDS) scores, Hb1Ac, apoE4 and HCY. Biomarkers were additionally adjusted for batch effects. We used an ethnicity equivalent d homolog (i.e., "dEQ"). Wave 2 dEQ scores were used. Thus, the model is longitudinal and arguable causal. Furthermore, we randomly divided the cohort into 2 groups. Group A (n = 1691) was used to construct the model, while

Group B (n=1694) was used to replicate and verify the parameters of interest. Analyses were conducted in Analysis of Moment Structures (AMOS). Results: Model fit was excellent [?2 = 514.673(49), p =0.0; CFI = 0.891; RMSEA = 0.053]. Serum C3 was found to mediate 16.5% of Educations association with Wave 2 dEQ scores (p<0.001) (Table 1). The effect generalized across random subsets of TARCC's sample. Discussion: CSF C3 levels are associated with AD severity (Wang el al 2011). It has a role in phagocytosis of fibrillar amyloid B by microglia (Fu el al 2010). Education is a protective factor for developing AD. This protective role is partially mediated by C3. Complement C3 plays a role in mediating Education's independent effects on dementia severity.

No. 124

Challenges in Management of Behavioral Agitation Secondary to Probable Sporadic Creutzfeldt-Jakob Disease

Poster Presenter: Yiqin Xu

SUMMARY:

Mr H. is a 84 year old Caucasian male with no past psychiatric history and a medical history significant for parkinsonian gait and atrial fibrillation(status post pacemaker), who was admitted to the family medicine inpatient service due to a 4 week decline in his mental status beginning with expressive aphasia, babbling, confusion, suspected auditory hallucinations, progressing to displays of bizarre behaviors such as stomping barefoot in mud and threatening son with pitchfork while wearing nothing but 4 pairs of underwear. Differential diagnoses were broad including Lewy body dementia, corticobasal degeneration, subclinical seizures, prion disease, and paraneoplastic encephalitis. During the first 5 days of hospitalization Mr. H continued to exhibit violent behavior including pinching, punching family members and staff, on a daily basis that required physical restraints in addition to acute treatment with multiple antipsychotics. Concomitant use of standing Seroquel and PRN IM Haldol for acute exacerbations was successful in reducing the frequency of violent outbursts. Following the initiation of treatment, his mental status was significant for periods of lucidity and jovial affect interspersed with infrequent acute violent agitation. Latter episodes of agitation were responsive to non-pharmacologic interventions including optimization of his hearing aids and frequent reorientation. The extensive medical work up ultimately confirmed the diagnosis of prion disease (suspected sporadic Creutzfeldt-Jakob Disease). In this poster, we will discuss the challenges and successes of Seroquel and nonpharmacologic interventions in symptomatic management of rapidly progressive prion disease.

No. 125

Genetic Link and Treatment Challenges Between Schizophrenia, Marfan's Syndrome and Polycystic Kidney Disease

Poster Presenter: Modupe Ebunoluwa James, M.D.
Co-Authors: Charles Rodolphe Odom, M.D., Michael Burescu, Luisa S. Gonzalez, M.D.

SUMMARY:

Marfan's Syndrome (Marfan's) is caused by a mutation in the Fibrillin 1 gene on chromosome 15. This leads to failed transforming growth factor beta (TGF-B) signaling which is believed to be one of the targets for the aberrant TGF-B signaling in the brain and this is what predisposes the Marfan's patient to schizophrenia (1). Another genetic finding indicates that Marfan's has a co-occurrence to the Polycystic Kidney Disease (PKD) 1 locus shared with PKD. Research studies also imply that mutations of the dystrobrevin gene have been linked between PKD and Schizophrenia. Consistent findings of this connection has lead researchers to believe that Marfan Syndrome and Schizophrenia are occurring together at a higher rate than expected, specifically if the patient has co-morbid PKD. We present a case of a 50-year-old, schizophrenic man, who upon admission to the inpatient psychiatric unit was disorganized, paranoid and agitated in the context of noncompliance with medication. There was no diagnosis of Marfan's syndrome or PKD prior to his admission. After several studies and assessments, with collaboration of the multiple departments, the diagnosis was confirmed. Due to the complexities in our case this led us to conduct a literature review to discern the possible genetic connections between the patient's psychiatric diagnosis and his medical co-morbidities. Managing non complaint schizophrenic patients can be challenging due to the

lack of insight into their medical and psychiatric condition. Marfan's involves different organ systems and requires meticulous follow-up with cardiology, nephrology and the ophthalmology service. A multidisciplinary team approach is recommended for these complex cases to ensure adequate and timely care. Understanding the genetic relationship between Marfan's, PKD, and schizophrenia warrants further attention in order to improve current knowledge and clarify a possible common etiology

No. 126

Genes Involved in Neurodevelopment, Neuroplasticity, and Bipolar Disorder: CACNA1C, CHRNA1, and MAPK1

Poster Presenter: Taeyoun Jun, M.D.
Co-Author: Sungjune Bae

SUMMARY:

Background: Bipolar disorder (BPD) is a common and severe mental disorder. The involvement of genetic factors in the pathophysiology of BPD is well known. In the present study, we tested the association of several single-nucleotide polymorphisms (SNPs) within 3 strong candidate genes (CACNA1C, CHRNA7, and MAPK1) with BPD. These genes are involved in monoamine-related pathways, as well as in dendrite development, neuronal survival, synaptic plasticity, and memory/learning. Methods: One hundred and thirty two subjects diagnosed with BPD and 326 healthy controls of Korean ancestry were genotyped for 40 SNPs within CACNA1C, CHRNA17, and MAPK1. Distribution of alleles and block of haplotypes within each gene were compared in cases and controls. Interactions between variants in different loci were also tested. Results: Significant differences in the distribution of alleles between the cases and controls were detected for rs1016388 within CACNA1C, rs1514250, rs2337980, rs6494223, rs3826029 and rs4779565 within CHRNA7, and rs8136867 within MAPK1. Haplotype analyses also confirmed an involvement of variations within these genes in BPD. Finally, exploratory epistatic analyses demonstrated potential interactive effects, especially regarding variations in CACNA1C and CHRNA7. Conclusion: Our data suggest a possible role of these 3 genes in BPD. Alterations of 1 or more common brain pathways (e.g., neurodevelopment and neuroplasticity, calcium signaling) may explain the obtained results.
Acknowledgment This study was supported by a grant of the Korean Health Technology R & D Project, Ministry of Health & Welfare, Republic of Korea (HI12C0003).

No. 127

Are Psychiatric Conditions and Medications a Risk Factor for Delirium?

Poster Presenter: Victor G. Patron Romero, M.D.

SUMMARY:

Delirium is an acute onset of cerebral dysfunction, in which a change from baseline cognition can be seen, including inattention, changes in level of consciousness or disorganized thinking. [1] Delirium can go unrecognized in up to 32-66% of hospitalized patients [2] and it has been estimated a cost ranges from $38-162 billion per year [3]. Many studies have measured incidence and prevalence of delirium in correlation with surgical intervention, and although a correlation with depression and depressive symptoms has been seen [4,5], studies identifying more specific mechanisms underlying the relationship between delirium and psychiatric diagnoses are lacking; furthermore, no studies have looked at other psychiatric conditions as risk factors for delirium and their profile of symptoms. A sample of 85 patient admitted to the hospital and diagnosed of delirium with and at least one psychiatric diagnosis including dementia was analyzed to assess psychiatric conditions and different families of psychiatric medications as risk factor or protective factor for delirium and length of hospitalization and amount of psychotropics administered. After ANOVA for psychiatric conditions including dementia, substance abuse, Bipolar disorder, depression, psychosis and different psychotropic medication there was no difference o increase risk for delirium in those with the afore mentioned psychiatric conditions, which goes against know literature listing Depression as a risk factor for delirium. When not controlling for age, depression did have an effects in longer stay in the hospital even above dementia.

No. 128

WITHDRAWN

No. 129

The Warrior for Christ: Doctrine or Delusion?
Poster Presenter: Anindita Chakraborty, M.D.
Co-Author: Musa Yilanli, M.D.

SUMMARY:
Background: Religious beliefs are commonly seen in psychiatry and it can be challenging to disentangle what is normal versus what is pathological. The following case illustrates this challenge. Case: Mr. K is a 50 yo veteran with a history of a diagnosis of Bipolar I disorder and opiate use disorder who presented with symptoms of anxiety, restlessness and insomnia. He complained of stomach cramps and diarrhea. On mental status he appeared tremulous, hyperverbal but cooperative. He self tapered his Quetiapine and Suboxone and said "God cured my bipolar disorder!" He admitted to feeling the happiest he has been in his life. 6 months ago, he had joined an online ministry and now spends hours praying and casting out demons online. He called himself the "warrior for Christ" chosen to rid the world of Satanic spirits. His wife reported that he stopped watching TV and refused to have sex with her, calling it all "Satanic". Despite this he was able to work as a janitor. During the course of his hospital stay, patient refused all medications, except for Suboxone. His anxiety and insomnia improved, but his religious views persisted. Review of records over the past year revealed that patient presented multiple times at other VAMCs with similar symptoms after stopping his Suboxone. His symptoms would improve on restarting Suboxone but his religious views persisted. Discussion: There are no clear guidelines to differentiate religious beliefs and religious delusions. Peter et al devised an empirically validated scale called Peter's Delusions Inventory consisting of 4 measures of the delusional experience: dimensional scores for "conviction, preoccupation and distress" and a mean total score. A variety of studies among psychotic patients vs. religious and non religious controls have found that psychotic patients have higher mean total scores but there was significant overlap between ranges of mean total scores and dimensional scores. That is delusions and religious beliefs lie on a wide spectrum. Intensity of each dimension, particularly preoccupation and impaired functionality are more suggestive of psychosis. Delusional content and clinician's perceived falsity of the delusion may not help as religious experiences are subjective. Shared beliefs may argue against psychosis. True religious beliefs are persistent and do not respond to medications. Our patient's beliefs came with intense conviction and preoccupation, relieving his emotional distress and causing only partial functional impairment. His beliefs predated his stopping Quetiapine and close follow up revealed persistence of beliefs. Notably, his beliefs were never a safety concern. During admission, author felt puzzled, and wondered if this patient was psychotic purely based on the content of his beliefs. In conclusion it may be helpful to evaluate suspected religious delusions within a dimensional framework, while being cognizant of one's own beliefs to ensure therapeutic alliance.

No. 130
Barriers to Medication-Assisted Treatment in Alcohol Use Disorder: A QI Initiative Among Detroit Veterans
Poster Presenter: Anindita Chakraborty, M.D.
Co-Authors: Musa Yilanli, M.D., Daniel J. Goyes, M.D., Umair A. Daimee, M.D., Sandra Reyes, Lauren Wake, Karen M. Parisien, M.D., Nicole Stromberg, M.D.

SUMMARY:
Aims: Alcohol use disorder (AUD) is highly prevalent amongst veterans. VA DoD guidelines recommend medication assisted treatment (MAT) i.e. either Acamprosate, Disulfiram, Naltrexone or Topiramate in the treatment of moderate-severe AUD. Despite their efficacy they are not widely used. VA administrative data reveals that only 8.5% of patients with AUD in the Detroit VA, received MAT in the last 6months compared to a national average of 10.5%. Our study aims to 1) Identify barriers to using MAT for AUD 2)To design sustainable interventions to increase the percentage of patients with AUD receiving MAT to 15% over a 6month period. Methods: Using the PDSA (Plan, Do, Study, Act) framework, our first PDSA cycle introduced a 6-item questionnaire distributed to 10psychiatrists, 12 psychiatry residents and 5 primary care physicians (PCPs) at the Detroit VA. The questionnaire was self-administered, followed by a brief unstructured interview for qualitative data. We assessed rates at which MAT was prescribed and offered as well as

barriers and patient characteristics when prescribing MAT. Our survey gathered information regarding physician preferences for sustainable interventions that may lead to increased rates for prescribing MAT. Results: Physician viewpoints were stratified into attending psychiatrists, psychiatry residents and PCPs. Attendings offered MAT to an average of 60-80% of their caseload but ended up prescribing in 20-40% of cases on average. Resident's rates of offering and prescribing MAT were much lower at 0-20%. Only 1 out of 5 PCPs claimed to prescribe MAT at all. Most common medication prescribed was Naltrexone, Gabapentin was a close second though not considered first line by VA DoD guidelines. Among psychiatrists, most common barrier to prescribe MAT was non compliance with medications whereas residents' primarily cited a lack of experience. PCPs cited lack of experience as well, along with a lack of time to address AUD. The most important factors influencing prescription of MAT was patient willingness to take the medications and a willingness to quit alcohol. Provision of educational materials to patients was the most preferred QI intervention followed closely by physician education to build awareness. Conclusions: MAT treatment in AUD is underutilized and rates at the Detroit VA fall below national standards. Our first PDSA cycle concluded that the most important factors influencing prescription of MAT was a willingness to take the medications and a willingness to quit alcohol. Physicians suggested patient and physician education as most preferred interventions. Our second PDSA cycle will involve conducting a MAT workshop for physicians and distributing educational materials to patients during visits. A questionnaire for patients exploring perceptions regarding MAT will be conducted as well. A re-audit will be performed 6months from starting date. With increased awareness, MAT will become standard of care at the Detroit VA.

No. 131

Black and White Bugs: A Case of Delusional Parasitosis

Poster Presenter: Jillian Porter Larsen, M.D., M.P.H.
Co-Author: Kelin M. Ogburn, M.D.

SUMMARY:

Mrs. E, a 58 y.o. Hispanic female with no previous psychiatric history, presents to the Emergency Department complaining of black and white bugs crawling on her skin. Past medical history was significant for cardiovascular accident (CVA) 8 years prior (left MCA-PCA territory) with some residual right-sided weakness, hypertension, and diabetes. Patient reports she has felt the bugs crawling on her skin for the past 1-2 weeks and during evaluation, she picks on her skin to show them. She has multiple small wounds to her bilateral hands and lower extremities that appear consistent with skin picking and showed no signs of infection. Patient reports occasional social drinking and denies any recent recreational drug use, though she does endorse a remote history of cocaine use. Patient's husband reports that he has never seen one of these black and white bugs and denies substance use by wife. Patient's presentation of delusional parasitosis had a broad differential diagnosis, including schizophrenia of late onset, delusional disorder, psychosis secondary to a general medical condition [CVA], obsessive-compulsive disorder, and substance induced psychotic disorder. Mrs. E was admitted to inpatient psychiatry and started on an antipsychotic at a low dose (risperidone 0.5mg) due to patient's age and history of CVA as well as diphenhydramine for pruritus. Patient's urine drug screen returned positive for amphetamines, cocaine, and opiates. Further collateral from patient's oldest daughter revealed history of methamphetamine use in the family home and that her younger daughter was recently jailed for drug-related offenses. Patient then finally admitted to recent use of cocaine. Patient responded well to risperidone and reported she did not see any bugs on her skin throughout her admission. The final diagnosis was substance-induced psychotic disorder. Patient's prior medical history of CVA, female gender and older age made the diagnosis of substance-induced psychotic disorder less evident. Despite the swift resolution of this case, admission was warranted for diagnostic clarification safety concerns. Due to the severity of her delusional thinking, patient was at risk of self-harm by skin excoriation, overdosing on medications like antihistaminics to treat the pruritus, or applying of chemicals to her skin to eliminate the perceived infestation. This case serves as a good reminder that substance use can affect any person of any gender, age, or prior medical history and the importance of

timely urine drug screens in patients presenting with psychosis.

No. 132

Expanding the Role of Psychiatrist in Difficult Cases of Psychosis With Underlying Medical Conditions

Poster Presenter: Komaldeep Gill
Lead Author: Gagan Deep Mall, M.D.
Co-Author: Amardeep Sahota

SUMMARY:
Current literature lacks robust evidence which addresses the role of psychiatrist in diagnosing disabling medical conditions such as Huntington's Disease (HD) where, in most cases, psychiatric symptoms present several years prior to onset of chorea. Although affective disorders and OCD are more commonly present, still psychosis is seen between 3 to 11 percent of cases. Many studies show no correlation of psychiatric symptoms with duration of disease, repeat length, or presence of dementia or motor symptoms; therefore, diagnosis is delayed in such cases. To emphasize this, we report an interesting case of a 57 year-old patient admitted in a forensic psychiatric treatment facility presenting with psychosis and paranoia who developed intermittent movement disorder later. On admission physical examination, no involuntary movements were noted. No improvement in this movement disorder which was possibly considered an extra-pyramidal symptom (EPS) was seen on switch from Olanzapine to Quetiapine. As the patient's psychosis improved, he gave a history of similar involuntary movements in his mother. HD was considered in the differential diagnosis of psychosis with chorea and genetic testing confirmed the diagnosis of HD. There are no clear guidelines to differentiate psychosis caused by psychiatric disorder or psychosis occurring as a pre-clinical manifestation of an underlying medical condition like HD. More studies are needed to help differentiate between these two diagnoses as psychiatrists may play the role of a primary care physician for patients presenting with psychiatric illness secondary to a medical disorder.

No. 133

Salt Into Wounds: A Case Report on Hypernatremia-Related Agitation in a Patient With Traumatic Brain Injury (TBI)

Poster Presenter: Salima Jiwani, M.D.
Co-Authors: Alison Dempsey, Sanjay Yadav, M.D.

SUMMARY:
Hypernatremia is a potentially life-threatening medical emergency, defined as serum sodium concentration >145 mEq/L. Signs and symptoms include muscle cramps, seizures, headaches, intracranial hemorrhage, lethargy, coma, and death. Gradual correction of hypernatremia prevents cerebral edema and serious neurologic complications. Patient is a 28 year old female, with a history of mitral valve stenosis and double outlet right ventricle. She has a psychiatric diagnoses of Bipolar Disorder, ADHD, and substance use disorder including cocaine, hallucinogens, MDMA, cannabis, and tobacco. Patient was admitted eight months ago to the hospital following a motor vehicle accident resulting in a severe brain injury. Injuries sustained included right parietal subarachnoid hemorrhage, bilateral intraparenchymal hemorrhage, multiple facial fractures, liver and spleen lacerations. Following a two week admission, she was discharged to a rehabilitation center. Patient was readmitted two weeks later from the rehab center with hypernatremia and dehydration. Patient was found to have panhypopituitarism and central diabetes insipidus following which she was started on desmopressin. Patient was transferred back to the rehab facility and over a period of two months she was progressing well. She then started exhibiting mild agitation which gradually progressed to "behavioral issues." She underwent multiple trials of medications to manage agitation following which she started experiencing increased sedation, tachycardia and diaphoresis, which led to another hospital admission fearing neuroleptic malignant syndrome but we found her to have developed dystonia. The patient had been refusing medications including desmopressin and free water boluses. Patient's labs were notable for hypernatremia for the majority of the six week long hospital admission. Her sodium levels were in the range of 128-163 (more than eight instances of sodium greater than 155). Throughout her stay, patient had multiple episodes of being agitated, verbally abusive, and combative, which often led her to being put in four-point restraints. She also had periods of extreme

restlessness during which she would walk along the hospital hallways and corridors. It was noted that patient was more agitated when her sodium levels were elevated. While this patients location of brain injuries may explain her disinhibition and agitation, an emerging correlation between aggression and elevated sodium levels should be noted. With this correlation in mind, patients presenting with TBI-related hypernatremia need to be monitored closely for changes in behavior and sudden fluctuations in sodium levels. Compliance with treatment is of utmost importance in patients with such a complex constellation of symptoms. In addition, we should be aware of a wide array of electrolyte imbalances associated with TBI, not just hyponatremia- the most common presentation. In this case, the opposite presents, with lasting effects.

No. 134

Foxtrot or Jitterbug: Still Dancing With Delirium

Poster Presenter: Salima Jiwani, M.D.
Co-Authors: Sean Nutting, Aum A. Pathare, M.D., Maryam Zulfiqar, M.D.

SUMMARY:

Autoimmune encephalitis has a variable presentation; understanding this is critical for prompt identification and management. A 71 year old female with hypothyroidism, diabetes mellitus type 2, major depressive disorder and generalized anxiety disorder presented with four days of worsening choreiform movements in all extremities. She awoke with a tongue ulcer, progressing to multiple oral ulcers. She then developed mild involuntary movements, after which she visited her PCP who attributed the symptoms to worsening depression, and increased her escitalopram dose of 3 years from 30 mg to 40 mg daily. She then presented to the emergency department and was given a diagnosis of oral thrush and discharged home. She later developed periorbital edema and a nonpruritic, non-painful rash on the extensor surfaces of her arms and face. The following day, she returned to the ED and was transferred to our facility; escitalopram was discontinued. She was found to have elevated AST and ALT, inflammatory markers, and Coxsackie a4 and B1 antibody titers. CT scan revealed focal hypodensity at the inferior basal ganglia which led to an MRI, revealing punctate acute infarcts in the bilateral putamen and an early subacute left posterior putamen infarct. Neurology suspected small-vessel, cardioembolic, or vasculitic etiologies. Dermatology performed a biopsy of the rash, results were nonspecific. Her movements were rapid, large-amplitude, asynchronous, more distal than proximal, choreiform, and terminated with sleep. Lorazepam was given for worsening movements but they exacerbated over the next three days. She became agitated, combative, and confused; quetiapine and haloperidol were used. Given the risk of worsening movement disorder with neuroleptics, dexmedetomidine was preferred, but proved ineffective. She was then sedated with propofol and fentanyl and intubated. Methylprednisolone 1000 mg IV q24h was initiated and the movements ceased. A CSF analysis following a lumbar puncture was unremarkable. An EEG performed during sedation demonstrated diffuse background slowing and sharp transients in the frontal region. The patient was weaned off sedation and extubated, but remained delirious. Her purposeless movements in all four extremities were less severe and distinct from her prior movements. Mentation and involuntary movements gradually improved. She was transitioned from IV steroids to oral prednisone 60 mg daily. During hospitalization, multiple specialties gave multiple diagnoses: SSRI discontinuation syndrome, akathisia and vitamin deficiency. The presentation of delirium concurrent with ballistic movements is an uncommon manifestation. Given the rarity and complexity of autoimmune encephalitis, a high degree of suspicion to provide early treatment, evidenced by her quick response to steroids, was required. This erratic presentation should prompt psychiatrists to suspect an autoimmune etiology for similar clinical pictures to initiate treatment.

No. 135

Pica: Discussion of a Unique Presentation to a Crisis Service, Underlying Causes, and Management Strategies

Poster Presenter: Sarah Miller, M.D.
Co-Authors: Amanda Jane Gavin, M.D., Emily Maguire, M.D., James Jefferson Graham, D.O., Jessica Graham Kovach, M.D.

SUMMARY:

Ms. J is a 62 yo F with past medical history of CHF, End Stage renal disease, hepatitis C, diabetes, dyslipidemia, and hypertension who was brought in by her daughter after ingesting a month's worth of medications. While the emergency room physician reported this was an intentional overdose, the patient denied ever having suicidal ideation and said life was worth living for her grandchildren. She reported craving dirt, was physically unable to obtain dirt, and therefore decided to eat her medication. Ms. J reported that she had been eating 1-2 tablespoons of dirt her "entire life" at least once per week. "My father taught us (pt and 7 siblings) to eat dirt. . . not because we were hungry, it's just what we did in Virginia. " At times during her adult life she tried to substitute oats, flour, and other more acceptable food substances but found that these did not satisfy her cravings and did not give her the same relief that eating dirt did. She recognized that this behavior was unusual and chose not to reveal it to her physicians or her family. Social history was significant for being raised by an alcoholic father and multiple episodes of sexual trauma by her siblings as a child and as an adult. She raised 3 children on her own and held various jobs as a mechanic until she developed renal failure one year ago. Determining the underlying causes of this patient's pica was complicated by anemia of chronic disease, multiple medical problems, depressive symptoms in response to the stress of her medical illness, severe trauma history, chronic non-distressing voice hearing, and cultural and family acceptance and encouragement of pica behavior. Discussion of best treatment practices for pica is currently lacking in the psychiatric literature. In this poster we discuss the importance of awareness of the possibility of pica in patients presenting to a psychiatrist and the challenges of determining the causes of and best management of pica.

No. 136

Fycompa (Perampanel) Worsening Aggression in a Patient With Lennox Gastaut Syndrome: A Case Report and Review of Current Literature

Poster Presenter: Sasidhar Gunturu, M.D.
Lead Author: Jagteshwar Sandhu
Co-Author: Suzanne Lippman

SUMMARY:

Lennox Gastaut syndrome (LGS) is a severe, disabling childhood epileptic encephalopathy that affects 3-10% of all those with epilepsy. Patients with LGS may exhibit resistance to treatment with most first line anti-epileptic drugs (AEDS). There has been increasing evidence of co-existing psychiatric and cognitive deficits in LGS patients. Interestingly, over the last decade there has been increasing evidence that newly launched AEDS may show increase propensity to induce or worsen a wide range of psychiatric symptoms and thus should be used with caution and close monitoring. In this poster we review the history of a young Hispanic male with a past medical history of LGS with intractable epilepsy, neurocognitive impairment, left frontal lobectomy, and a past psychiatric history of OCD. He was admitted to the hospital for altered mental status, increased aggression, and onset of homicidal and suicidal ideation reportedly following initiation of treatment with Fycompa. Fycompa is a medication indicated for the treatment of refractory epilepsy and it's unique in its class. It acts as a noncompetitive antagonist of the AMPA glutamate receptor in the central nervous system. There is an increasing amount of evidence that link Fycompa with the occurrence of psychiatric symptoms. Thus we discuss the pharmacology and review the current literature on Fycompa. This review may offer aid to clinicians while treating patients with Fycompa.

No. 137

Evaluating the Effectiveness of Brief Psychotherapy for Oncology Patients

Poster Presenter: Seth Gabriel Rosenblatt, M.D.

SUMMARY:

This poster will present preliminary findings from a recent research study conducted at the George Washington University Medical Faculty Associates Department of Psychiatry. Psychological distress and morbidity (including loneliness, anxiety, depression and PTSD) may be triggered or exacerbated by cancer diagnosis (Swartzman, et al 2016). Depressed cancer patients show worse treatment adherence and worse survival compared with non-depressed cancer patients (Hartubf et al, 2017). Cancer survivors in the United States reported using medication for depression and anxiety at twice the rate of the general public (Hawkins et al 2017).

Childhood cancer survivors may experience post-traumatic stress symptoms as young adults or adults. Psychiatrists and resident trainees are not normally trained to deal with special needs of cancer population, and this training takes place within the GW psychooncology clinic. Given the high prevalence of mood disorders and adjustment disorders among oncology patients, this study will aim to assess if our current intervention is beneficial in addressing the client's target symptoms. The study will examine the effectiveness of brief psychotherapy for oncology patients. Currently, patients are referred to the psychooncology clinic from various oncologists and social workers with the oncology center. Resident psychiatrists provide 5-8 sessions of brief psychotherapy to address issues of anxiety, mood changes and adjustment to diagnosis. This study aims to examine if therapy sessions achieve the goal of helping to decrease anxiety and mood changes and changes patient's outlook on life. Patients will be administered surveys assessing for depression, anxiety and well-being prior to and following therapy sessions and the results will be compared. The hypothesis is that patients will score significantly lower on the anxiety (GAD-7) and depression (PHQ-9) questionnaires and higher on the WHO 5 measure Quality of Life Scale, indicating that the several sessions of brief psychotherapy were effective in helping them to develop positive coping skills to adjust to their diagnosis and how it impacts their lives.

No. 138

Influence of Psychiatric Comorbidities in Hospital Readmission Rates in Patients With Chronic Obstructive Pulmonary Disease

Poster Presenter: Shehryar Khan, M.D.

SUMMARY:

Introduction: Hospital readmissions contribute as a significant factor in high healthcare costs. Chronic Obstructive Pulmonary Disease (COPD) is the third leading cause of death, and patients with COPD have 30 day readmission rate of 19.6%. Patients with COPD have high comorbidity with depression, anxiety and cognitive impairment (CI). The objective of this cross sectional study was to determine if underlying psychiatric comorbidities influence the readmission rates. There was an additional intervention arm, but data analyses is incomplete at this time and only results from the cross-section study are presented as below. Methods: Newly admitted COPD patients (n= 107) were evaluated for demographic, clinical and putative risk factors by reviewing charts, conducting interviews and administering Mini-Cog and Hospital Anxiety and Depression Scale. Baseline data against number of past 12-month admissions were examined, and were tabulated from Electronic Medical Record. Covariation of risk factors and number of past year admissions were tested using univariate tests (Pearson Product-Moment Correlation Coefficients & Student's T-test). Results: Statistically significant results for higher admission rates were observed for history of Arterial PO2 < 40 (p=0.02), preadmission oxygen use (p=0.027), a prior hospitalization within the last 30 days (p=0.04), abnormal Head CT reading (p=0.08), number of comorbid conditions (p=0.03). Current marital status of being married was a statistically significant protective factor against number of hospitalizations (p=0.05). Statistically non-significant results were observed for anxiety, depression, age, sex, years of education, ethnicity, living circumstances, BUN, ammonia, arterial PCO2, FEV1/FVC severity, positive toxicology Screen, active smoking, recorded memory difficulties in-hospital or by family report, history of substance use, history of psychiatric hospitalization/psychiatric care/psychotropic medication use, items from the Mini-Cog, pack-years of smoking. Conclusion: Two predictors of number of admissions (Hx of a positive head scan & Hx of severe hypoxemia) are consistent with the hypothesis that CI increased likelihood of readmission, and that family support/compensation (marital status) decreases readmissions. The failure of the items from the Mini-Cog to reach significance is puzzling, requiring further investigation. Illness severity and complexity (number of comorbid conditions and oxygen use) also covaried with number of past year admissions. The failure of multiple medical factors commonly assumed to increase readmission risk (e.g., active smoking, FEV1/FVC, Age) is interesting and suggests that CI may be a far more potent cause of readmissions.

No. 139

Culture and Grief: The Confluence of Physical and Emotional Pain

Poster Presenter: Shelley Co, D.O.

SUMMARY:
Introduction: Grief is defined as a reaction to a loss, which involves the deprivation of something or someone. Bereavement refers to the state or period after a loss while the term mourning can be used to describe the external expression of grief. Certain cultures like those based in South America and Asia tend to somatize and so it is perceived as more culturally accepted to seek help for physical ailments rather than emotional ones. A complex situation then arises when a loss occurs to an individual with certain cultural expectations with regards to the expression of emotions. Case: Patient is a 54 year old Hispanic male with a significant medical/surgical history of liver transplant (nine months ago) as a result of Hepatitis C cirrhosis who initially presented with right sided abdominal pain. The patient was admitted to the surgical service due to concern for appendicitis. During this hospitalization, the patient had an unremarkable CT of the abdomen and pelvis and an unrevealing colonoscopy and no etiology of the pain could be identified. Patient about one week prior to this hospitalization reported that his wife of more than thirty-five years had died and so psychiatry was consulted to evaluate for a possible somatic symptom disorder. Upon talking about his wife to the psychiatry team, patient began to weep uncontrollably and endorse hopelessness, helplessness as well as suicidal thoughts; he also kept repeating that he was in pain and wanted to know what medications were going to be given to address his pain although there was no medical reason for this pain. This patient was eventually admitted to the psychiatric unit. Discussion: In some cultures, patients are more willing to discuss physical rather than emotional pain. Often times, these patients are dismissed once the work-up of the initial presenting complaint, that being a physical one, is done and no medical etiology can be found. However, it is important to recognize that the "pain" is real even if actually psychologically rooted and to maintain cultural sensitivity as a way to appropriately detect and manage emotional distress and mental illness.

No. 140
Catatonia Secondary to Hashimoto's Encephalopathy

Poster Presenter: Shivani Kumar, M.D.
Lead Author: Caroline Meehan
Co-Authors: Joseph J. Cooper, M.D., Holly Shiao

SUMMARY:
Catatonia is a neuropsychiatric syndrome with marked motoric findings which can be related to a psychiatric disorder or a general medical condition, such as Hashimoto's encephalopathy (HE). HE is a rare and poorly understood autoimmune syndrome, with an estimated prevalence of 2.1/100,000, characterized by rapidly progressive altered consciousness, seizures, and myoclonus (Ref 1). Other forms of autoimmune encephalitis are known to present with catatonia (Ref 2), including a few reports associated with HE (Ref 3-5). A woman in her 80s, with a psychiatric history of depression, was admitted for altered mental status. The family reported 2-3 weeks of progressive disorientation, agitation, paranoia, and echolalia. She was brought to the hospital where she became unresponsive, while maintaining an odd, "stiffened" posture. She was treated for suspected infection (WBC 20.1), hyponatremia (Na 119), and hypercalcemia. Her mental status failed to improve and she continued to have mutism, echolalia, and stereotypies. Infectious etiologies were excluded and paraneoplastic encephalitis panel was negative. Further workup revealed elevated ANA (320), anti-double stranded DNA (80), anti-TPO (440), and antithyroglobulin (1860), concerning for an autoimmune process. Imaging revealed right temporal/occipital/parietal and right posterior thalamic hyper-intensities concerning for encephalitis or prion disease. CSF was positive for 14-3-3 and t-tau (>4000) but the prion-specific RT-QuIC was negative, indicative of neuronal destruction without a specific etiology. Her stay was also complicated by intermittent seizure activity, urinary tract infection, and poor oral intake. Given high suspicion for autoimmune encephalitis, the patient was treated with steroids with partial improvement. At this time, her motoric symptoms were recognized as possibly catatonic, and psychiatry was consulted on Hospital Day 15 for catatonia. On exam, she had a Bush-Francis Catatonia Rating Scale (BFS) (Ref 6) of 31 with immobility, mutism, posturing, grimacing, stereotypy, waxy flexibility, withdrawal, rigidity,

automatic obedience, and gegenhalten. Intravenous lorazepam was started and BFS scores showed progressing improvement: 24 on Day 16; 12 on Day 19. Given anti-thyroid titers with otherwise negative workup, patient was diagnosed with HE. She was given a second steroid trial on Day 21, this time with concurrent intravenous lorazepam continued, which resulted in further improvements of her BFS to 7 on Day 21, and 4 on Day 22. Our case of HE showed rapid neuropsychiatric deterioration with seizures and severe catatonia. Treatment with lorazepam resulted in a robust response, consistent with data that catatonic symptoms respond to lorazepam regardless of the underlying condition driving the catatonia (Ref 7). Catatonia treatment should involve both treatment of the underlying disorder and concurrent symptomatic catatonia treatments such as lorazepam.

No. 141

Steroid-Induced Mania: A Case Report and Brief Literature Review About the Treatment and Prophylaxis

Poster Presenter: Suneela Cherlopalle, M.D.
Co-Author: Manasa Enja, M.B.B.S.

SUMMARY:
Corticosteroids are a widely used and highly effective treatment for a number of medical conditions, including immunologic and in?ammatory disorders, systemic lupus erythematosus (SLE) and systemic vasculitis, asthma and chronic obstructive pulmonary disease, cancer, acute and chronic back pain, and in the prevention of postoperative swelling in head and neck surgery. Unfortunately, while the medical side effects are well laid down, the neuro-psychiatric complications of the steroid use are not very well described. They range from delirium, depression, mania, mixed types and psychosis. Limited literature is available on the treatment options of the given conditions. This poster is to discuss the presentation of the steroid induced mania review of the treatment options for the steroid induced mania and also discuss the role of using prophylactic agents like Lithium and carbamazepine. Methods: We report a case where the patient presented with manic features after initiating dexamethasone 16 mg for her post chemotherapy nausea, improvement of appetite. She was treated with steroid taper and also with olanzapine antipsychotic. Patient was followed on an outpatient basis to see the improvement. Results: Patient's symptoms resolved after being treated with the low dose Olanzapine for 6 weeks. Discussion: With increasing use of corticosteroids in medicine there is higher occurrence of neuropsychiatric symptoms. Though the pathophysiology is not well understood, but clinical practice may bene?t from greater awareness of these potential adverse events and of methods to possibly prevent and treat them. In a 5 week open label trial Olanzapine at a dosage of 8.5 mg /day has been able to treat 11 out of 12 patients with steroid induced mania. A case series of 20 patients, treated with sodium valproate at a dosage of 500 mg BID has shown rapid reversal of mania in 48 hours. Isolated case report indicate resolution of symptoms with seroquel. Lithium has been indicated as a prophylactic agent in hypoalbuminemia, blood brain barrier damage and dose more than 40 mg of prednisone per day. Conclusions: Antipsychotics and mood stabilizers are currently used in the treatment and prophylaxis of steroid induced mania

No. 142

Evidence for Using rTMS Among Older Adults With Psychiatric Disorders: A Systematic Review

Poster Presenter: Suneela Cherlopalle, M.D.
Co-Authors: Arjun Nanda, Rajesh R. Tampi, M.D., M.S., Kirsten D. Wilkins, M.D., Geetha Manikkara

SUMMARY:
OBJECTIVES: The aim of this systematic review is to identify published randomized control trials (RCTs) that evaluated the use of repetitive transcranial magnetic stimulation (rTMS) for psychiatric disorders among older adults. METHODS: A literature search was conducted of PubMed, MEDLINE, OVID and PsychINFO databases for randomized controlled trials (RCTs) in any language that evaluated the use of rTMS for various psychiatric disorders among adults were searched through September 30, 2016. Only studies that were published in English language journals or had an official English translation were included in the final analysis. Additionally, bibliographic databases of published articles were searched for additional studies. RESULTS: A total of 40 RCTs were obtained through the search

strategies. Conditions studied (n=number of RCTs) included mild cognitive impairment (MCI) (n=1), Alzheimer's disease (n=4), major depressive disorder (n=14), schizophrenia (n=5), treatment resistant depression (n=4), geriatric depression (n=2), bipolar depression (n=2), depression in Parkinson's disease (n=1), vascular depression (n=1), nicotine dependence (n=1), cocaine addiction (n=1), motor cortical function (n=2) and pain perception (n=1). Available data indicate that in the majority of the studies rTMS was well tolerated, but efficacy results were variable with some studies showing benefit whereas other studies showed limited efficacy. CONCLUSIONS: Although limited, available evidence suggests that rTMS is a safe and effective procedure. Side effects associated with its use include mild insomnia, transient headache, transient scalp tenderness, hearing problems that spontaneously resolve, transient difficulty concentrating, and worsening depression without need for any specific intervention in the majority of cases. rTMS may benefit various aspects of Alzheimer's disease including an improvement in attention and psychomotor speed with sustained effects lasting for 3 months.1 Its use in individuals with schizophrenia did not appear to show significant benefit as in 3 trials there was no difference in refractory auditory hallucinations.2 However, there was improvement in negative symptoms in two trials.2 The majority of the studies of rTMS in depressive disorders showed no significant clinical benefit but some symptoms, like psychomotor retardation, did improve. In treatment resistant depression, only one of the four studies showed benefit with greater remission rates in the group that used rTMS. No significant benefit was noted among the trials involving individuals with bipolar depression and geriatric depression. Greater chance of abstinence was found among older individuals with cocaine dependence and nicotine dependence who received treatment with rTMS.3,4 These results indicate that rTMS may be beneficial for certain psychiatric disorders in older adults but the risks and benefits of its use should be carefully assessed before embarking upon treatment .5

No. 143

Medical Students' Attitudes Toward Torture, Revisited

Poster Presenter: Andrew Milewski

Co-Authors: Krista Dubin, Thomas Peter Kalman, M.D., Joseph Shin, M.D.

SUMMARY:

Background: While medical organizations worldwide have unambiguously condemned physician involvement in torture, historically, state-supported torture programs have always included participation by medical professionals. We report findings of a survey of medical students' attitudes towards torture and discuss variables that may correlate with those attitudes. Methods: 483 enrolled medical and MD-PhD students at the Weill Cornell Medical College received an anonymous, IRB-approved survey that included demographic items, questions about torture and its effectiveness, inquiries about personal experiences of harassment or discrimination, and items regarding engagement in human rights activities. Some items were drawn from a 2008 University of Illinois College of Medicine study of medical student attitudes towards torture, the only prior such survey. Ordinal regression and correlation analyses were employed to ascertain relationships between participant responses. Results: 121 participants (25% response rate) returned completed questionnaires, with more than 90% of responses indicating strong opposition to torture and skepticism about its usefulness. Interestingly, students were most opposed (97.5%) to interrogators employing tactics that would cause physical distress or injury. Those who believed that torture is immoral also supported prohibiting torture as a matter of state policy. The majority of responses also favored disciplinary or legal action for health professionals who were found to have designed, committed, or otherwise facilitated acts of torture. A number of demographic factors, including age, gender, sexual orientation, ethnicity, and religion, were not found to bear on respondents' attitudes towards torture. Individuals who had personally experienced harassment or had a family member with such a history were less opposed to torture than those with no such experiences; however, this trend did not reach statistical significance. Participants were more opposed to torture compared to respondents of the 2008 survey. Voluntary engagement in Weill Cornell's human rights program was associated with significantly stronger opposition to torture. Conclusion: Although

demographic factors were found to be noncontributory, a statistically significant correlation was seen between students' participation in the human rights program and their attitudes towards torture. The sizable difference in students' opposition to torture between the present and 2008 studies may be related to the absence of a human rights program for University of Illinois students at the time of their survey. Other factors may include the extensive coverage of intervening human rights disasters, such as those in Syria, and a generally increased awareness of all human rights abuses, including but not limited to torture.

No. 144

Mindfulness Training in the GME Setting: Ways and Means to a Mindful Resident

Poster Presenter: Andrew Charles Martina, M.D., M.A.
Co-Author: Vineeth John, M.D., M.B.A.

SUMMARY:
Mindfulness has been recognized as a potential asset with regard to enhancing resident trainee well-being and resiliency. Mindfulness involves "cultivating our ability to pay attention in the present moment as we suspend our judging." Currently, there is scant literature describing real world examples where mindfulness practices have been integrated with residency training. This poster intends to highlight the attributes of studied modalities for mindful trainings in residency, as well as the challenges to their implementation within the framework of residency education. There are multiple documented approaches to delivering the basic tenets of mindfulness ranging from large, extended courses to brief cellphone based guided meditations. Mindfulness based stress reduction courses and their video counterparts have the benefits of providing a robust introduction to common mindful techniques and ongoing opportunities to understand and implement skills over a longer period of time. These courses are generally offered on a varied schedule, lasting 6-8 weeks, usually outside the workplace in a retreat style environment. This approach necessitates a higher cost for their implementation as well. While retreats may provide a longer lasting or more robust response, they are often impractical given the prohibitive demands of both their expense and time commitments. Shorter classroom based interventions allow residents to attend a brief series of presentations designed to deliver high yield mindfulness techniques along with opportunities to demonstrate these skills. Classroom courses lend themselves to easier integration into resident didactics and clinical schedules at a reduced cost burden to programs. However, limited evaluation of this approach indicates it may only benefit a small subset of residents in particular settings and may not lead to short-term improvements in the self reporting of burnout. Two studies to date have assessed the feasibility of a smartphone based intervention, increasing the accessibility and usability of a mindfulness practice for residents at a manageable cost with the capacity to still provide some benefit. At this stage, the research of mindfulness training in residency is generally under powered, relying heavily on self reporting, is often unblinded and without a control population. When integrated into resident education, mindfulness training has the potential to provide the support and stress reducing resiliency augmentation residents greatly need. With appropriate attention paid to program culture and trainee routines, residents can work with their residency administration to pinpoint the what, when, and how of efficiently integrating mindful practice into their education.

No. 145

Finding Calm Before the Storm: A Hurricane Preparedness Model

Poster Presenter: Durim Bozhdaraj, M.D.
Co-Authors: Monica Lynn Vega, M.D., Ashley Beattie, M.D.

SUMMARY:
Hurricane Season runs from June 1st to November 30th and, here in South Florida, hurricane preparedness is an important topic. This year, the psychiatry department at Jackson memorial Hospital in Miami, Florida has worked with faculty and residents to develop a preparedness plan to help prepare residents and faculty in the event of a hurricane. While this is not a new plan, it is important to remember that keeping faculty and staff up to date on the basics of hurricane preparedness may prevent some confusion when it

is time to implement these action plans. For the hurricane preparedness plan there are several factors to consider; coverage, relief, safety, and supplies. The plan needs to ensure that each department has an adequate number of staff available to provide care for the patients in the hospital during a storm. A relief team of staff volunteers that are located on site and are available to take over for the primary team should be identified in case environmental factors prevent others from entering or leaving the hospital for some time. The hospital environment needs to be safe for all patients and staff throughout the storm. Supply stores for food, water, and medications should be monitored. Hurricane season can be a very stressful time for many. While preparing for every possible outcome of a hurricane is impossible, keeping residents and staff as prepared as possible and helping them to create their own safety plans can help to reduce some of the stress felt throughout the hurricane season.

No. 146

Warranting Well-Being? The Accreditation of Psychiatry Training Programs in Australia and New Zealand

Poster Presenter: Diana McKay, M.B.B.S.
Co-Authors: Amro El Sholkami, David C. Furrows, M.D., Gagan Garg, Michelle Atchison

SUMMARY:

Background: The Royal Australian and New Zealand College of Psychiatrists (RANZCP), through its Accreditation and Education Committees, defines standards for the accreditation of psychiatry training programs in Australia and New Zealand. Linked with these standards are five-yearly site visits, which aim to review and accredit programs against these standards in a robust and transparent way, noting both areas of commendation and recommendations for improvement. Site visitors include two psychiatrists, a trainee (psychiatry resident) and RANZCP administrative secretariat. In light of growing international and local awareness of concerns over burnout and depression in residency years, the Accreditation Committee recently reviewed existing Accreditation Standards to focus more clearly on wellbeing1,2. This reflects a growing interest within the RANZCP to promote wellbeing for psychiatrists in training, as well as for qualified psychiatrists. This is in line with moves in other countries, such as the USA, highlighting the need for training accreditation to more explicitly consider wellbeing 3. Objective: Program Accreditation Standards cover five governance, clinical and educational domains. The changes made to Program Accreditation Standards in light of wellbeing considerations will be explored, including areas of ongoing review and development. Resident workload in acute adult inpatient psychiatry terms has also been an area of interest to the Committee, noting the potential for conflict between training and service provision when workload is excessive. Other changes made to accreditation programs include ways to maximise the trainee voice and engagement in the accreditation cycle, with the addition of a trainee pre-accreditation visit survey to identify areas of concern, the circulation of an accreditation report summary to trainees and the trial of a mid-cycle review process. Psychiatry trainees (residents) are also represented on the Accreditation Committee itself, in line with RANZCP practice for many College committees. Conclusion: These accreditation changes will be compared with training accreditation standards the USA and Canada, given this is an international area of concern.

No. 147

Practices Regarding Use of Metformin for Antipsychotic-Associated Weight Gain

Poster Presenter: Emily Louise Ottiniano, D.O.

SUMMARY:

Background: Weight gain associated with antipsychotic use is a prevalent problem amongst psychiatric patients. The alterations occur in not just body weight and BMI but in metabolic measurements such as Hemoglobin A1C as well as lipids and can occur irrespective of weight gain. Although the medical literature recommends the use of metformin to prevent and treat antipsychotic-associated weight gain, providers infrequently follow this evidence-based recommendation. We are interested in assessing the prevalence of use of Metformin in psychiatric settings as well as if there are any concerns that outpatient psychiatrists have about using a medication such as Metformin in their

practice. Methods: Patients- Retrospective chart review of random sampling of 110 charts to determine the patients' diagnoses, medication regimens, and weight and BMI measurements. Providers- 11 PGY3 resident psychiatrists voluntarily completed a survey before and after receiving an educational handout about metformin use. Surveys were conducted one month apart. They were asked about current prescribing patterns, barriers to use, and preference for educational interventions. Results/Conclusions: Patients- Of those on an antipsychotic, metformin and who did not have comorbid Diabetes Mellitus, the male sample's weight and BMI were higher than those only on an antipsychotic and in the female sample, the weight and BMI was less than the female only on an antipsychotic. This result may be related to the typical patient demographic that is seen at the outpatient psychiatric clinic, those who tend to be chronically ill and on long-term antipsychotics. Providers- First survey: There was a wide range of responses to the proportion of how many patients were on an antipsychotic, on an antipsychotic with metabolic derangements. Majority (80%) started a patient on Metformin and 40% felt comfortable prescribing Metformin. Some of the reasons for not prescribing Metformin that were of note included: attendings not being comfortable with prescribing Metformin; not feeling that the data was compelling enough to outweigh the risk versus benefit; concerns about complicating an already complicated regimen along with concerns about patient adherence. Majority reported that an educational handout would be most helpful for comfort with prescribing Metformin. Second Survey: wide range of responses to number of patients eligible to start Metformin. 4 Residents started a patient on Metformin in the preceding month. The range for comfort in prescribing Metformin was wider and overall there was an increase in the comfort level with bimodal distribution of comfort level. 7 referrals made to outside providers for a prescription for Metformin. Majority found the educational information helpful and that it increased their comfort with Metformin.

No. 148

Comparing the Effectiveness of a Guide Booklet to Simulation-Based Training for the Management of Acute Agitation

Poster Presenter: J. Corey Andrew Williams, M.D., M.A.

SUMMARY:

Objective: The objective of this study was to compare the teaching effectiveness of a simulation-based training to reading a resident on-call psychiatry guide booklet in improving the self-confidence and knowledge of residents that is necessary for managing acutely agitated patients. Methods: Pre-intervention self-confidence and knowledge were measured for all residents using a Likert scale questionnaire and a clinical vignette questionnaire, respectively. Residents (n = 23) were randomly assigned to either the simulation group (n = 12) or the guide booklet group (n = 11). Residents in the simulation group completed the simulation-based training, and residents in the guide booklet group were instructed to read the corresponding pages of the booklet regarding management of acute agitation. The comparative teaching effectiveness of the guide booklet and simulation-based training were measured with a post-intervention self-confidence questionnaire and a clinical vignette questionnaire. Results: Residents who participated in the simulation-based training showed significantly greater improvement in self-confidence (simulation median improvement = 1.458 vs. guide median improvement = 0.033, p = 0.002) and knowledge (simulation median improvement = 0.135 vs. guide median improvement = 0.021, p = 0.0124) when compared to the guide booklet group. Conclusion: Simulation-based training was more effective at improving residents' self-confidence and knowledge compared to the on-call psychiatry booklet for the management of acutely agitated patients. Simulation-based learning is an underutilized teaching tool psychiatry, and this finding underscores the potential for utilizing simulation-based training in psychiatry residency programs to improve resident learning.

No. 149

Characterizing E-Cigarette Use in Smokers With Mental Illness

Poster Presenter: John Wang
Co-Authors: Amy Gravely, Erin Rogers, Scott Sherman

SUMMARY:

Background: Smokers with mental health conditions (MHC) are often more addicted to cigarettes and have greater difficulty quitting than those without MHC. Electronic cigarettes (e-cigs) have been suggested as tools to assist in quitting smoking, but their use in smokers with MHC is not well-characterized. We assessed e-cig use among smokers with MHC by investigating their reasons for use, readiness to quit smoking, and attributes of mental illness. Methods: We used baseline survey data from a large randomized smoking cessation trial enrolling smokers with a mental health visit in the past year. Veterans Health Administration (VA) EMR was used to identify participants from 4 national VA hospitals and to obtain data on psychiatric diagnoses. Former e-cig use was defined as having ever tried an e-cig. A contemplation ladder of 0-10 measured readiness to quit smoking. Pearson's Chi-Square and ANOVA Type 3 F-Tests were used to analyze findings. Results: Among 1836 participants, mean age was 58 years (STD11 years) and 87% were male. Top primary psychiatric diagnoses included substance use disorder (42% of subjects), depression (15%), PTSD (10%), other alcohol disorder (7%), and anxiety (6%). Participants smoked 15 cigarettes per day on average and 79% smoked within 30 minutes of waking. 15% of subjects were current e-cig users (n=275) and an additional 27% were former e-cig users (n=503). 65% of e-cig users reported "wanting to quit smoking" as a primary reason for e-cig use. A past smoking quit attempt was reported by 90% of current and former e-cig users and 82% of never-users (p<0.0001, OR=0.53, 95%CI=0.40-0.70). Mean readiness to quit smoking (0-10) was 7.2 (STD2.6), 6.8 (STD2.8), and 6.4 (STD3.0) for current, former, and never e-cig users respectively (p=0.0002). Mean confidence to successfully quit (0-10) was 5.4 (STD2.5) for all 3 groups. A longest quit attempt length of 1 week or less was reported by 50% of current and former e-cig users and 42% of never-users (p=0.01, OR=1.37, 95%CI=1.08-1.74). Mean number of psychiatric diagnoses was 1.9 (STD1.4) for current and former e-cig users and 1.6 (STD1.4) for never-users (p=0.0003). 63% of current and former e-cig users and 55% of never-users reported some mental distress on the Kessler-6 scale (p=0.0003, OR=0.73, 95%CI=0.60-0.88). A primary psychiatric diagnosis of alcohol or substance use disorder was recorded for 50% of current or former e-cig users and 60% of never-users (p=0.0003, OR=0.69, 95%CI=0.56-0.84). Conclusions: E-cig users were more ready to quit and reported a past quit attempt more often than non-users, possibly because they adopted e-cigs to assist with quitting. However, they were not any more confident in their success. Non e-cig users had less severe mental illness and were more likely to have alcohol or substance use disorder as their primary psychiatric diagnosis. Future research should investigate the smoking cessation success of e-cig users in mental health populations.

No. 150

Difficulty With Initiating ECT in a Patient With Catatonia

Poster Presenter: Kim Hoang, M.D.

SUMMARY:

Ms. S is a 30-year-old educated Asian American female formerly employed as a ticket operator who was admitted for the symptoms of isolating herself, poor hygiene and self-care, and screaming. She had 1 prior psychiatric hospitalizations two years prior in the context of worsening bizarre and isolative behavior, poor ADLs, and paranoia. The times when she did leave her house, she engaged in dangerous behaviors such as a climbing up a tree and sitting there or sitting near a freeway without clear intent of suicide. Patient did not believe she had a mental illness and refused medication. She remained selectively mute- speaking only to her social worker at select times, slowly paced the hallways from the time she awoke to the time she slept- up to 15 hours of a time. She would only interrupt her stereotyped pacing to sit down for a meal or go to sleep. She did not shower, often missed meals days in a row, and did not engage with any of the treatment team or others on the ward. Medical work-up was negative. Court order of medication was required and she was tried on several different antipsychotics including clozapine without improvement in her symptoms. Her affect remained flat, she exhibited extreme negativism, and showed stereotypy – if a person or object were in her way, patient would continue bumping into the person or object until it was removed. Family was involved and did not feel that they could overcome her oppositional attitudes. High doses of lorazepam IM were administered by

court order as she did not want medication with minimal improvement in her catatonic symptoms. Court ordered ECT was pursued with barriers to implementation as patient was oppositional and remained so. Patient could not cooperate with procedure or remain still. ECT and high doses of benzodiazepines are the treatment of choice in the treatment of catatonia. In this poster, we discuss the challenges of implementing ECT for the treatment of catatonia when other psychotropics and methods have been used in a patient who is oppositional.

No. 151

Cannabilistic Desire: Diagnosis and Treatment

Poster Presenter: Lisa Herrington, M.D.
Co-Author: Heather Kimberly Mak, M.D.

SUMMARY:
Self-mutilation can be a common feature in multiple psychiatric disorders, but urges to eat one's own flesh and the flesh of others is not. In this case, a 21-year-old male presented to the inpatient psychiatry ward after self-amputating his left small finger and ingesting it. He had a history of ego-syntonic desire to eat his own flesh and the flesh of others. He also reported auditory hallucinations that urged him to complete this action. Differential diagnosis of this patient was broad and included personality disorder, psychotic disorder, mood disorder, impulse control disorder, and paraphilia. His ego-syntonic desire and hallucinations persisted despite multiple trials of psychotropic medications, but a combination of an antipsychotic and an antidepressant inhibited him from acting on these urges. This case report explores the diagnostic and treatment dilemmas of managing a patient with cannibalistic desires and behaviors.

No. 152

Development and Implementation of a Residency Area of Distinction in Lesbian, Gay, Bisexual, and Transgender Mental Health

Poster Presenter: Matthew E. Hirschtritt, M.D., M.P.H.
Co-Authors: Weston Scott Fisher, M.D., Ellen Haller, M.D.

SUMMARY:
Background: Lesbian, gay, bisexual, and transgender (LGBT) individuals often encounter stigma, victimization, exclusion, and perceived discrimination, which are thought to contribute to the increased rates of mental health conditions within this marginalized group. In turn, perceived discrimination may reduce help-seeking behavior. Therefore, residency programs need to train future psychiatrists to recognize and address mental health issues in their LGBT patients. Here, we describe a novel "area-of-distinction" (AoD) in LGBT mental health within an adult psychiatric training program. Methods: Our large, university-based residency training program recently developed an LGBT psychiatry AoD that provides elective specialized training for residents interested in developing LGBT mental health expertise. Core organizers, who included both residents and faculty, reviewed the literature, discussed relevant clinical rotation opportunities, and developed ideas for how to convey LGBT-specific medical knowledge. Working-group members generated a list of topics and competencies and used a consensus-building process to organize these topics into three broad content categories: (1) LGBT minority stress, (2) medical and psychiatric issues specific to LGBT communities, and (3) identity and lifespan issues in LGBT individuals. In order to receive a certificate of AoD completion at graduation, participants are required to complete at least two LGBT-oriented clinical rotations, lead yearly peer-to-peer educational sessions, review the relevant knowledge base, regularly participate in individualized mentorship, and complete and disseminate a scholarly project that reaches an audience beyond the residency program (e.g., a poster presented at a professional meeting). Results: The program was launched in the 2013-14 academic year. Our residency program has 16 residents in each class; to date, the AoD has graduated 5 residents, and 6 residents are currently active in the AoD. Twelve faculty members, associated with 8 clinical rotations across 3 training sites volunteer their time as AoD mentors, and an additional 3 research faculty volunteer time to assist residents with their scholarly projects. Current and graduated AoD residents have cited clinically useful knowledge and skills that have strengthened their ability to work effectively with LGBT patients. Conclusion: The creation and launch of this LGBT Psychiatry AoD has led to 11 residents receiving specialized training so far. It has also

facilitated the creation of a warm and diverse community of individuals within our department committed to working with LGBT patients. We hope that this AoD's components may serve as a resource for training program leaders considering ways to integrate LGBT-specific education into their curricula.

No. 153

Auditory Hallucinations in Nonpsychotic Patients: A Sign of Disorder or Defense Mechanism

Poster Presenter: Meghan Elizabeth Quinn
Co-Authors: Janee Noel Mestrovich, D.O., Benjamin R. Hershey, M.D.

SUMMARY:

Background: Auditory hallucinations, the most common type of hallucinatory experience, have long been part of the diagnostic criteria for mental illness. However, research has shown that auditory hallucinations are not uncommon in individuals who are otherwise not psychotic. Prevalence varies by study, but estimates range from 1-10% of the pediatric population experiences some form of nonpsychotic hallucination at some point, with similar prevalence data reported in adult studies. There are different approaches to understanding the origin of these nonpsychotic hallucinations, ranging from analysis which sees them as a defense mechanism to modern behavioral approaches which struggle to place them in the framework of disease. Case: This patient is a 29 year old female with a past psychiatric history dating back to adolescence, where she describes promiscuity, alcohol and drug use, and mood lability beginning in high school and continuing on into adulthood. In adulthood she began to show borderline, obsessive compulsive, and anxious traits. There is evidence of some form of mental illness present in her brother and both parents, leading to a generally chaotic home environment for most of her childhood. At some point, the patient began experiencing auditory hallucinations, which have persisted into adulthood. These hallucinations are not command or persecutory, but rather comment on the patients surroundings in a way that relates to her anxieties and obsessions. Despite the presence of these hallucinations, the patient does not show signs of psychosis or disorganized thought patterns. She has the insight to appreciate that these hallucinations are not real. She presented to the emergency department and was subsequently admitted to the inpatient ward after an 8 month period of progressive decompensation following the deployment of her spouse. Whereas she had previously been able to largely ignore her hallucinations and continue about her daily life, she now reports that the hallucinations were intrusive and distressing and she was not able to ignore them. After inpatient stabilization, she was discharged to an intensive outpatient treatment program. Conclusion: Several psychoanalytic theories exist that promote auditory hallucinations as defense mechanisms in response to stress. Many of these theories suggest that hallucinations are protective against the development of future or worsened mental illness. While more traditional diagnostic criteria saw hallucinations as a sign of psychosis and mental illness, current research suggests that the phenomena is widespread among otherwise healthy individuals, giving credence to the theory that auditory hallucinations as a defense mechanism may be protective in individuals without other signs of mental illness. However, in individuals who present with signs of mental illness in addition to auditory hallucinations, these positive symptoms may be associated with worsened disease state.

No. 154

A Collaborative Approach to Mental Health Training for Internal Medicine Residents in the Ambulatory Setting

Poster Presenter: Nkemka Esiobu, M.D., M.P.H.

SUMMARY:

Primary care physicians are often the first to encounter undiagnosed/untreated mental health disorders and inadequately addressed mental health issues account for a significant amount of morbidity, mortality, and health care costs. However, internal medicine residents report low comfort levels with seeing patients with mental illnesses despite frequently encountering them in their primary care clinics. The aim of this project was to create a psychiatry resident led collaborative interdepartmental (Psychiatry and Internal Medicine) skills based workshop for internal medicine residents to address both attitudes

towards mental illness in primary care and gaps in primary mental health education through an innovative and interactive workshop. A survey assessing comfort with and attitudes towards primary mental healthcare was disseminated to 120 Yale New Haven Hospital Traditional Internal Medicine residents. Subsequently a 4 hour need based workshop was crafted focusing on 1) mental health stigma in health care 2) the impact of trauma across the lifespan and 3) substance use disorders in primary care. Quantitative and qualitative feedback from preliminary survey data and workshop discussion sessions was gathered. Results confirmed that residents exhibited minimal comfort with addressing mental health issues in their primary care rotations, many felt that mental illness affected the majority of their patient panels, and they desired more training and greater interdepartmental collaboration to better care for their patients.

No. 155

Chief Resident for Research in Psychiatry Residency Training

Poster Presenter: Stefana B. Morgan, M.D.
Co-Author: Victor Ivar Reus, M.D.

SUMMARY:

Co-Authors: Stefana Morgan, MD, Susan Voglmaier, MD, PhD, Victor Reus, MD, Erick Hung, MD, Jody K. Williams, MS, Michael Jacob, MD, PhD, Andrew Krystal, MD Background: Diversifying the chief resident model beyond the traditional clinical chief roles could enhance leadership opportunities for senior residents. Non-psychiatry residencies have introduced novel chief roles, such as the Chief Resident for Research (CRR), but few psychiatry prorgams have followed suit. Since 2015, the University of California San Francisco (UCSF) Department of Psychiatry has appointed three Chief Residents for Research. Role Description: PGY-4 residents in the UCSF Research Residency Training Program (RRTP) engage in ?75% research and devote the rest to clinical duties. PGY-4 RRTP residents can chose to apply to the RCC position, but RRTP operation is not chief-dependent. Notably, the RCC has a primary research project outside of RCC duties and to protect this focus, the RCC role is half of traditional chief roles, (only 10% of full time). 1) The main responsibility of the CRR is to improve research opportunities, visibility and outcomes for RRTP residents and non-RRTP residents engaged in research or scholarship projects. The CRR serves as a liaison between residents and RRTP leadership, provides near-peer mentoring and helps connect residents to research funding vehicles at UCSF and nationally. 2) The second role of the CRR is to assist with planning and implementing basic neuroscience and evidenced-based psychiatry education. Additionally, the CRR helps lead and improve RRTP events (i.e. resident recruitment days, departmental research day, bi-annual cutting edge science workshops, and California-wide psychiatry resident retreat). Informally, the CRR also provides guidance regarding the hidden curriculum of academic research – helps residents troubleshoot obstacles, advocates for balance between research and clinical obligations, and helps navigate relationships with mentors, peers and the department. Results: Of the three Chief Residents of Research at UCSF, two are male and the current one is female. Each resident customized the position to fit their interests while responding to program needs. The 2015-2016 chief focused on updating the neuroscience curriculum, and wrote a paper describing the California Research Resident Retreats. The 2016-2017 chief contributed to the innovative Neuroscience in the Media lecture series and improved the monthly Works in Progress dinners. The 2017-2018 chief is writing a paper reporting exploring motivations, outcomes and career trajectories for RRTP residents. She also updated the map of faculty study fields and projects, benchmarks for resident progression through the program, and sources of resident research funding. Conclusions: The chief resident of research role has the potential to provide research residents with leadership training opportunities and to improve the educational experience for all residents.

No. 156

Psychiatry Research Resident Training: Outcomes, Reflections and Pathways to Research

Poster Presenter: Stefana B. Morgan, M.D.
Co-Author: Victor Ivar Reus, M.D.

SUMMARY:

Co-Authors: Stefana Morgan, MD, Jody Williams, MS, Victor Reus, MD, Susan Voglmaier, MD, PhD, Andrew Krystal, MD Background: The shortage of well-

trained psychiatrists engaged in mental health research has increased over the last 20 years. One response to this alarming trend has been to bolster the educational pipeline for research psychiatrists with multiple interventions along the learning continuum starting in medical school or residency. One of these innovations is the Resident Research Training Program (RRTP) at the UCSF Department of Psychiatry, created in 2000. The program's development process, including its organizational structure, eligibility criteria for residents, and core program elements, have been described elsewhere along with 11 years of outcomes data (Tsai 2013). The current poster will present data that is a part of a larger study that aims to investigate the factors that motivate UCSF RRTP residents to continue to engage in mental health research after graduating from residency. It also aims to characterize the pathways, backgrounds, prior research experience, demographics, research outcomes, productivity and career trajectories of RRTP residents after graduation. This poster will focus on the data regarding RRTP resident outcomes. Methods: The study utilizes data on residents who participated in the RRTP, including newly collected data, publically available data and data that was already collected during RRTP enrollment, such as research project applications, resident demographics, research progress reports, etc. Quantitative data include personality traits, current positions and practice settings, percent of time devoted to research, support mechanisms in the post-residency transition, perceived barriers, perceived benefits to pursuing research and other motivating factors impacted participants' likelihood to pursue research careers. Results: The data, including past and current RRTP demographics, accomplishments, background and research interests as well as personality characteristics and qualitative findings regarding major themes of motivating factors will be presented in the poster at the APA in May 2018. Of the 74 residents who were enrolled in the RRTP between 2000 and 2017, 63 have already graduated. There is a general trend of an increased enrollment in the RRTP for UCSF residents over the last 5 years. Of the 63 graduates, 44 have continued to engage in clinical or basic research and have entered or completed clinical or research fellowships. Conclusions: Multiple factors influence the career development of research psychiatrists and understanding those factors can help increase the number of psychiatrists involved in mental health research. Interventions such as the UCSF RRTP can be instrumental in supporting psychiatrists to chose a career in research.

No. 157

Psychiatry Enrichment Programs: Evaluation of the Claassen Institute of Psychiatry for Medical Students

Poster Presenter: Zaza Lyons
Co-Author: Aleksandar Janca

SUMMARY:

Background: Psychiatry is an integral component of medical curricula around the world. Teaching and learning in psychiatry usually starts in the preclinical years and progresses to clinical clerkships. While attitudes towards psychiatry are reasonably positive, psychiatry as a career is regarded negatively by many medical students. Over the last ten years, in an attempt to improve recruitment there has been a growing interest in the development of psychiatry enrichment programs. These are extra-curricula programs specifically targeted towards students interested in learning more about psychiatry, both as a discipline and potential career pathway. The aim of this project was to evaluate the effectiveness of an innovative psychiatry enrichment program developed as a strategy to increase medical student interest in psychiatry as a career. It was hypothesised that student interest in a career in psychiatry would increase by the end of the program. Method: A novel enrichment program, the Claassen Institute of Psychiatry for Medical Students (the Institute) was developed at the University of Western Australia. The Institute was an intensive, week-long program that aimed to provide students with the opportunity to learn more about specialising and working in psychiatry. Interactive seminars covered diverse topics and current contemporary themes. Students also attended elective sessions at community and hospital-based mental health services. There was also a student led debate and interactive stigma discussion. Evaluation was conducted using questionnaires administered to students' pre and post program. Results: Between 2008 and 2015, 138 students (95 female, 43 male)

attended the Institute. Evaluation found that program attendance significantly increased student level of interest and knowledge in psychiatry. Numbers of students definitely considering a career in psychiatry rose from 77 pre-program to 106 post-program. Longitudinal evaluation found that approximately 20% of these were undertaking post graduate psychiatry training. Student comments included, 'This is the BEST program I've attended. Even though I was already initially interested in psychiatry, I am more motivated to do psychiatry as a career'; and 'Has helped me make up my mind that psychiatry is definitely for me'. Conclusion: Psychiatry enrichment programs are an emerging concept in medical schools that have the potential to improve the profile and image of psychiatry as a speciality to make it more attractive to medical students. The establishment of programs such as the Institute will enable psychiatry educators to act proactively to ensure that the psychiatric workforce remains sustainable in to the future. This was an unfunded study.

No. 158

The "On-Call Tracking Tool": The Process, Value, and Results of an Online Survey Designed to Examine Overnight Calls Taken by Psychiatry Residents

Poster Presenter: Jacqueline Posada, M.D.

SUMMARY:

Background: A cornerstone of residency is learning to assess a large volume and variety of patients, often in a less than optimal learning environment with stress, challenging clinical decisions, and sleep deprivation. Psychiatrists frequently remember their time on-call as integral to their development as autonomous physicians. In the GWU psychiatry residency program, one resident takes overnight call for the hospital managing acute issues on the psychiatric unit and responding to psychiatry consults from the emergency department (ED) and medical floors. Anecdotally, residents reported varying levels of labor and difficulty while on-call due to patient number, flow and systems-based issues. Residents desired an objective measure to know what was a "hard night" on-call, and a place to document difficulties that arose. An online survey was designed to track the number of patients seen while on-call, and provide a place for residents comment on their nightly experiences. Methods: The on-call tracking tool is an online Google-based survey which measures the number of patients seen by psychiatric residents on-call at GWU; a link to the survey is sent to residents by text message after each call. Residents answer 7 survey questions on the total number and disposition of patients (admission vs discharge)--a proxy for the level of risk each patient presents in their clinical psychiatric assessment. A free text area is available for comments. Data collection began in January 2017 and is ongoing. Results: From January to August 2017, the on-call tracking tool had a 78% response rate for overnight weekday logging. In a call pool of 11 to 13 residents, GWU on-call residents have logged 560 patient encounters, with 246 admissions, 198 discharges from the ED, and 46 submissions for involuntary commitment (FD12). On average, a resident completes 4 patient assessments per night, with 2 admissions and either 1 discharge from the ED, an FD12 submission or a consult from the medical floor. Comment themes cluster around challenges working with ED consultants, often regarding intoxicated or medically complicated patients with psychiatric complaints, as well as systemic issues such as patients in police custody or hospital staffing issues. Conclusion: The on-call tracking tool is a novel way to quantify patients seen on-call in an urban academic hospital setting. Residents are invested in their participation given benefits of quantitative data showing the number of patients seen on-call. These numbers can be used by the department to ensure a proper balance between education and service duties while on-call. Residents also appreciate hearing the themes of comments made by their co-residents about being on-call. Further research includes comparing the volume of patients seen by GWU residents to other programs in similar settings and considering if other outcomes such as PRITE or psychiatry board scores are influenced by number of patients seen during residency.

No. 159

The On-Call Committee: A Venue to Examine and Improve the on-Call Culture Through Learning Objectives, Role Expectations and Forum for Discus

Poster Presenter: Jacqueline Posada, M.D.

Co-Author: Karen Michal Wooten, M.D.

SUMMARY:
While on-call, a psychiatrist elicits and processes sensitive information regarding a patient's mental state and safety; this often happens in a suboptimal environment of sleep deprivation and other demands on time and attention. The demands of call, such as individual performance expectations and systemic issues affecting patient load and sleep deprivation, can contribute to physician burnout. Due to the sensitive nature of our work, the on-call experience for psychiatry must be approached with intentionality and awareness of effects of burnout and sleep deprivation on patient interactions. The ACGME program requirements for psychiatry graduate medical education do not specify learning objectives for call. Learning objectives and mission statements can foster a sense of purpose and mindfulness, which are identified as protective factors against physician and trainee burnout. Several years ago, residents at George Washington University (GWU) had to contend with the educational and service balance of call and identified conflict between supervising residents (PGY 2-3) and supervisees (interns) due to lack of clear learning objectives and expectations for roles while on-call. From this experience sprung the On-Call Committee (OCC) which aimed to provide peer-to-peer support for residents in the call pool and to contribute to an educational, supportive, and encouraging call culture. The OCC identified an opportunity to mitigate resident conflict and burnout by creating a mission statement for the on-call experience, expectations for junior and senior residents, and a venue to foster a sense of inter-relatedness between residents, where they can discuss their experiences and air any grievances with the system or culture of call. OCC representatives created the following mission statements: 1) for the team: to maintain patient safety and provide excellent patient care; 2) for the intern: to develop the skills, knowledge, and discernment of an upper level resident who is capable of taking solo call and eventually full autonomy; and 3) for the upper level resident: to guide, support, teach, and mentor the interns through their development as residents. A set of role specific expectations for upper-level resident and intern was created, disseminated to the residents, and also posted in the call room. Finally, the OCC continues to meet monthly as a place to discuss and fine-tune the mission and learning objectives of call as residents encounter challenging clinical situations. We argue that creation of the OCC allows room for examination of the on-call culture and provides a setting for evaluation and gradual changes to an on-call culture that expects optimal performance in a suboptimal environment. The OCC is a model that can be translated to other aspects of psychiatric practice as it highlights the importance of mission-statement, role expectations and a designated forum for discussion and reflection on objectives and mission of an exacting duty.

No. 160

Promoting Wellness in Residency: Process Group for Internal Medicine Residents at a Pacific Federal Facility

Poster Presenter: Alexander Kaplan, M.D.
Co-Author: Kinsley Hubel

SUMMARY:
In response to the ACGME mandate regarding promotion of wellness within residency programs, collaboration between the Internal Medicine (IM) and Psychiatry residencies at Tripler Army Medical Center (TAMC) led to development of a process group for the IM residents. The process group developed at this institution consisted of cycles of four groups of residents: the first week consisting of PGY-1 residents; the second week, PGY-2 residents; the third week, PGY-3 residents; and the fourth week, residents from all PGY classes. Each cycle therefore occurred over a four week period. Meetings were protected time in which the residents were expected to focus upon group. Clinical responsibilities were managed by chief residents who were excluded from participating in the groups. The groups were led by a clinical psychologist trained in group facilitation, with a generally unstructured environment. These sessions were designed to allow participants to voice concerns, share experiences, and build connection with the aim of promoting well-being for the individual residents and the IM residency program. The groups were discontinued in December 2017. This may be due to a convergence of factors such as negative feedback about the groups, focus on academic

requirements, and time limitations for IM residents. Therefore, it has been the effort of this team to evaluate the root causes for the failure of this process group. A survey was developed with the following factors in mind: resident perception of the purpose of the group, understanding of meeting attendance and expectations, perception regarding appropriate amount of structure in group, perception whether the group affected professional growth and empathy, and feedback regarding how groups should be structured in the future. It is with hope that this direct resident feedback may lead to formation of a group or relevant activity that is better suited to resident needs and will therefore contribute to improved resident wellbeing. This unique effort continues to serve as a valuable interdisciplinary venture to enhance support for each individual, for one another, and for the greater hospital community.

No. 161

Preventing Burnout: Perspectives of Residents and Faculty in Community-Based Training Programs

Poster Presenter: Ary Kian
Co-Author: Kristen Ironside

SUMMARY:

Introduction: Physician burnout is recognized as a significant problem which affects the health and well-being of individual physicians and also negatively impacts quality of care, patient safety and the overall sustainability of the health system (1). Prevalence studies indicate that one-third to one-half of all residents report burnout (2). A recent systematic review and meta-analysis of interventions to address physician burnout identified several interventions that effectively reduced burnout but concluded that more research is needed about the particular strategies or combinations of strategies with greatest value (3). The authors also recommended research on methods to develop and deploy intervention strategies and suggest that involving local physician stakeholders in the selection and implementation of strategies may result in more effective burnout prevention approaches compared to when interventions are externally developed without local input (3). As a first step in further developing the burnout prevention strategies for the residency programs at Kaiser Permanente Southern California we are conducting formative qualitative research with residents and faculty to learn more about how they perceive the problem of burnout and what they consider effective intervention strategies. Methods: From October to December 2016, we will conduct 14 focus group discussions with residents and core faculty affiliated with seven residency training programs at Kaiser Permanente Southern California including: family medicine (two programs), internal medicine (two programs), pediatrics (one program), psychiatry (one program), and obstetrics/gynecology (one program). The study protocol and topic guides were designed collaboratively by a team including researchers, administrators, residents and faculty. For each of the seven programs, one focus group will be held with core faculty and one with residents of all post-graduate years. All discussions will be audiorecorded and transcribed. Focus group transcripts will be coded using a predetermined list of codes as well as codes that emerge from reading the transcripts. We will present findings on participants' views about burnout including how prevalent it is among residents in their programs, the factors contributing to burnout, its consequences and prevention strategies. We will describe participants' previous experiences with burnout prevention/wellness programs including their views on what worked well and what was less effective and why, and the content and approaches they believe would be effective for future programs targeting residents. Potential Impact: Information obtained from this study will shape the development of burnout prevention programs at our institution, and may inform the design of programs at other graduate medical education institutions by contributing to knowledge about approaches that appeal to the target audience.

No. 162

Sexual Feelings of Psychotherapists: A Cross-Sectional Study

Poster Presenter: Lara Vesentini, M.Sc.

SUMMARY:

Background: Psychotherapists who feel sexually attracted toward clients are a common phenomenon. Studies, mainly from the eighties and nineties, show prevalence rates of sexual attraction

to clients between 60 to 90%. However, these studies are scarce, not having been continued in the last decades, and seldom include how to handle these feelings. Nevertheless, this is necessary because the population of psychotherapists, ethical perspectives, training and education have changed over time. **Aim**: This study determines to what extent 1) psychiatrists experience sexual feelings toward clients in Flanders (Belgium), 2) psychiatrists think that having sexual feelings is discussable in their work-field and 3) psychiatrists state this topic was covered within their education and training. **Method**: Based on earlier scientific studies and interviews with experts, a questionnaire was developed and pilot tested among researchers and psychotherapists in training. To improve response rate the "Tailored Design Method" was followed. In the spring of 2017 a call was launched two times in an online newsletter for psychiatrists with a weblink to the online-survey. In the beginning of 2018 a paper questionnaire and a letter of reminder was sent to the postal addresses of the psychiatrists in Flanders. In the spring of 2018 a second mailing and reminder will be send. Addresses were obtained via the National Institute for Health and Disability Insurance (NIHDI). **Results**: Preliminary results show a response rate of 23% (N=244). About 70% of the psychiatrists state to have been sexually attracted to clients during their career. More male psychiatrists reported this than female psychiatrists (85% vs. 57%). Respectively 40% vs. 12% fantasized about sexual contact with a client, 36% vs 9% felt sexually aroused during a conversation with a client and 30% vs 14% fantasized about how it would be to have a romantic relationship with a client. In addition, 57% of psychiatrists stated that having sexual feelings are barely or non-discussable in the work-field, and 93% reported that there was little or no attention in their basic psychiatric education about how to handle sexual feelings for a client. Compared to systemic (19%), behavior (11%) and person-centered therapists (15%), more often psychoanalysts (46%) reported that this topic was covered within their education and training. **Conclusion**: A great majority of psychiatrists reported to have been sexually attracted to clients during their career, especially male psychiatrists. A fifth of psychiatrists fantasized about a relationship with a client. However, the topic is hardly discussed in education, training or the work field. It is recommended to pay more attention to this topic in education and training, and to consider sexual feelings in the psychotherapeutic relationship as a non-deviant phenomenon.

No. 163

Use of Light Therapy to Improve Resident Wellness and Sleep During Nightfloat

Poster Presenter: Nicholas Edward Mahoney, D.O.
Co-Authors: Sabrina Reed, M.D., Katrina N. Hickle-Koclanes, M.D.

SUMMARY:

Introduction: A nightfloat schedule for medical residents creates an instantaneous unnatural sleep-wake cycle with little time to adapt. Research has varied in terms of the impact of call and nightfloat schedules on resident performance. However, the sleep disturbances caused by these work schedules has shown to be consistently related to worse resident wellness which, in turn, may lead to increased rates of burnout and poorer empathy. Bright light therapy provides a low risk intervention to address the sleep-wake disturbances caused by a nightfloat schedule and has been shown to alter the biological clock by as much as 12 hours in only a few days. We hope to utilize bright light therapy to aid medical residents in adapting to a nightfloat rotation schedule. Methods: We designed a quality improvement pilot study to be implemented within the University of Wisconsin Psychiatry Residency during the first year resident nightfloat rotations of the 2017-2018 academic year (8/14/17 - 6/29/18). Their schedule consists of two 2 week and one 1 week nightfloat blocks (5pm to 5am) spread over the course of the year. Residents were educated to use the lightbox at 10,000 Lux for 30 minutes between 4pm and 6pm starting the Friday prior to their 2 week block and continuing until the Wednesday of the second week. During their shifts over the treatment course, they were also instructed to use the lightbox between 5,000 and 10,000 Lux when sitting at their workstations between seeing patients. Other sleep hygiene recommendations were presented during the initial educational session. Residents were recommended to not use the lightbox during the 1 week nightfloat. Analysis: We will collect data using validated surveys to evaluate resident wellness, sleepiness, and difficulty

sleeping. For each of these categories we will have the resident fill out the survey prior to starting nightfloat, in the middle of nightfloat, and at the end of nightfloat. We will compare for changes in the surveys over the course of the nightfloat rotation. We will also compare the two week nightfloat rotations with the one week control nightfloat rotation. For resident wellness we will use the Brief Resident Wellness Profile. We will measure resident sleepiness with the Epworth Sleepiness Scale. We will assess for difficulty sleeping with the Insomnia Severity Index. We will also gather self-reports on frequency and ease of use of the lightbox and whether or not they used other sleep hygiene techniques. Collected data will then be statistically analyzed using a 2 sample t-test. Results: Data will be collected and analyzed following the final night-float rotation on 6/29/18.

No. 164

Physician Wellness: Comprehensive Evaluation of Stress, Burnout and Depression Effects on Medical Trainee Empathy and Compassion

Poster Presenter: Rustin Dakota Carter, M.D.

SUMMARY:

Introduction: Medical schools and residency programs seek to educate future physicians to be competent, well-rounded providers, capable of evidence-based and humanistic care. These long, arduous years of training strive to produce empathetic, knowledgeable physicians to provide compassionate care in this service-oriented profession (LCME, 2015; ACGME, 2015). Positive clinical outcomes are dependent upon healthcare providers that possess both clinical acumen and understanding of the patient's perspective. However, education across the nation varies in relation to how to develop a healthcare force capable of empathetic care. In addition, a changing healthcare system continues to add demands and stress, and recent research has shown increasing affective disorders in our students and residents. Empathy-related research, especially within healthcare, is sparse. Within the completed research, trends have been identified and theories have been put forth. Few studies have sought to validate those potential influences, especially in relation to increasing educational strains and innumerable knowledge and clinical stressors identified in the status quo of American medical schools and residency training programs (Hojat et al., 2009). Our study seeks to understand the connection between stress, burnout, and depression on empathy in medical residents, including demographic trends and correlation between emotional exhaustion, depersonalization and personal accomplishment (Maslach and Jackson, 1981) with empathy. Methods: This study seeks to address the paucity of literature related to career and educational stress and determine an effect, if any, on empathy in medical students and residents. The Maslach Burnout Inventory (MBI), the Patient Health Questionnaire-9 (PHQ-9) and the Jefferson Scale on Physician Empathy (JSPE) will be utilized to study this relationship. First study to utilize the JPSE and MBI to correlate burnout, stress with empathy. Results: Statistically significant relationship between emotional exhaustion and depersonalization with empathy (inverse correlation); positive correlation between personal accomplishment and empathy. Regression analysis revealed a statistically significant relationship between empathy and stress/burnout, regardless of demographic data; specifically, any trainee that reported high emotional exhaustion and depersonalization reported lower empathy; those that felt accomplished had higher empathy scores. High levels of burnout and depression seen as students and residents progress through medical school and training programs. Statistically significant findings correlated depression with high levels of burnout and low levels of empathy. Conclusions: Indicates strong need for curricular interventions to improve physician wellness and increase physician empathy. Students and residents with low burnout scores and higher feelings od accomplishment proved to have increased empathy and less depression overall.

No. 165

Residency, Motherhood, and Burnout: A Literature Review and Wellness Action Plan

Poster Presenter: Shannon L. Mazur, D.O.
Co-Authors: Kelli Marie Ruby, D.O., Valerie C. Sharpe, M.D.

SUMMARY:

More women are entering residency programs than

ever before. According to the Association of American Medical Colleges, the number of women who enrolled in medical school rose by 6.2% in 2016 and new enrollment in medical school was evenly divided between women and men. As the number of female medical trainees has risen, it has become increasingly important to address issues that specifically impact women during their medical training. Physicians are developing burnout at alarming rates compared to the general population. Most studies looking at gender disparities in burnout have shown that female physicians are at higher risk for burnout than their male counterparts. There is also a large body of evidence showing resident physicians in general are a high-risk population for burnout. Surprisingly, little research has been done to specifically address the risk of burnout in female residents. We hypothesize that, much like their non-resident female physician counterparts, female residents may also be at an increased risk for burnout. This is especially concerning as residency training typically spans part of the prime reproductive years of female residents, potentially placing them at risk during the perinatal period due to the personal demands of pregnancy, delivery, and caring for the newborn. As it is reasonable to expect pregnancies may occur during residency training, tailored strategies for combating burnout in this population must be developed. Preventing burnout, or addressing it early, is a high priority for multiple reasons. Research has shown that physician burnout is correlated with lower quality of patient care. There is also documented risk of depression and anxiety when burnout levels are high. Research shows that when women are depressed or anxious in the perinatal period, it can have deleterious effects on the woman, the pregnancy, and maternal-infant bonding. Therefore, the effect of burnout during the perinatal period could have far reaching implications necessitating distinct prevention strategies for this potentially at risk population during residency training. Utilizing literature review on Pubmed, we summarize what is known about gender disparities in rates of physician burnout and make a case for addressing burnout in female residents, particularly in the perinatal period. We also adapt Mayo Clinic's comprehensive plan for organizational strategies for burnout to address this particularly vulnerable subpopulation. Based on literature review and the Mayo Clinic's framework, recommendations include increasing female leadership, implementing support groups, addressing curriculum adjustments for maternity leave, and fostering a culture of community that supports work-life balance.

No. 166

Treatment Issues in an Elderly Female With Repeat Inpatient Psychiatric Admissions

Poster Presenter: Priyanka S. Adapa, M.D.
Co-Author: Raj V. Addepalli, M.D.

SUMMARY:

Ms. S., is a seventy year old African American widowed female, living alone, with a previous psychiatric history of schizoaffective disorder and a past medical history of uncontrolled diabetes mellitus. She has had over thirty inpatient lifetime psychiatric admissions and a longstanding history of noncompliance. She has been followed by an Assertive Community Treatment (ACT) team for the last two years. In spite of ACT Team follow up, she has had numerous admissions which on many occasions were back to back admissions. Her inpatient stays were characterized by extended periods, some of which were up to sixty days. On one occasion, she was readmitted within twelve hours of discharge. On this occasion, she was admitted for manic and aggressive behavior in the context of medication noncompliance within days of discharge from a different hospital. On our unit, the patient refused medications consistently and was uncooperative with vital signs and fingerstick glucose monitoring. She was observed to demonstrate extreme mood swings, quickly escalating to violent and aggressive behavior towards staff and other patients and then becoming calm. At times, she required intramuscular injections of Haloperidol and Lorazepam to calm her. She refused psychiatric, diabetic, and hypertensive medications, so a forced medication order was obtained through the local mental hygiene court. She showed clinical improvement on a regimen of Aripiprazole titrated to a dose of twenty milligrams per day orally and Sodium Valproate one thousand milligrams per day orally. She was extremely inconsistent on Sodium Valproate so it was discontinued. She was eventually discharged on four hundred milligrams of

intramuscular long acting Aripiprazole. Multiple meetings were held with her ACT team to ensure a safe discharge. Issues which emerged prior to discharge included obtaining her consent to make a duplicate key for her apartment, ensuring that her house was habitable, obtaining a referral for visiting nurse services for monitoring of her diabetes and hypertension, educating her on the importance of diabetic monitoring and compliance with her medication regimen, and obtaining home care services for an adequate amount of time. Unfortunately, she was ineligible for home care services as her personal income was in excess of the threshold required for eligibility. Also, the absence of a responsible family member who could provide adequate support made her discharge challenging. Eventually, she was discharged home with referral to visiting nurse services and ACT Team follow up. This case highlights the challenges in maintaining elderly psychiatric patients with comorbid medical issues who are only partially cooperative with their treatment regimen in the absence of community resources and social supports.

No. 167

Stem Cell Therapy as a Potential Tool in the Treatment of Alzheimer's Disease: A Literature Review

Poster Presenter: Senthil Vel Rajan Rajaram Manoharan, M.D.
Co-Authors: Allen D'Souza, M.D., Veeraraghavan Jairam Iyer, M.D., M.B.B.S., Najeeb U. Hussain, M.D.

SUMMARY:
Background: Globally about 50 million people live with Alzheimer's disease (AD) and it significantly affects the quality of life of the patients. AD is a progressive neurodegenerative disorder characterized by synaptic and neuronal loss. The current pharmacological interventions are not curative and offer only symptomatic relief. Stem Cell therapy has emerged as a potential treatment option in the treatment of AD. Recent years have seen a surge in the number of studies using stem cell therapy to modulate cognitive impairment via various mechanisms. Animal studies have been promising and has given hope for the use of stem cell based therapies. This review aims to examine the current evidence for the use of stem cell therapy as a potential treatment of AD. Discussion and Literature review: Stem cells have the ability for self-renewal and differentiate into different cell lineages. Neural stem cells (NSCs) and Mesenchymal stem cells (MSCs) are commonly used in research. The Neural stem cells in the brain can differentiate into neurons, astrocytes and oligodendrocytes. MSCs derived from bone marrow, umbilical cord blood and adipose tissue can be transdifferentiated into neuronal cells. In transgenic mice models, transplantation of MSCs have shown significant improvement in cognitive function, A-β deposition in the brain and decreased hyperphosphorylated tau. MSCs also modulate neuro-inflammation and an upregulation of anti-inflammatory cytokines has been noted. Cholinergic neurons from nucleus basalis of Meynert (nbM) brain are especially affected in AD. Studies have shown that more choline acetyltransferase was synthesized by modified NSCs and it significantly leads to improved cognitive function. The role of stem cell therapy in clearing up misfolded protein aggregates in mice models of down syndrome has also been noted. Down syndrome patients are at increased risk of AD with progressive memory decline and develop typical plaques and tangles. Results show that soluble growth factors from implanted murine NSCs leads to significant reduction in tau aggregates. Transplantation of murine MSCs from bone marrow into the hippocampus also has been shown to disappearance of A-β deposition after 7 days of transplantation. The use of inducible pluripotent stem cells (iPSC) has also shown promise. MSCs transplantation in a recent open-label phase I trial in humans however did not slow cognitive decline over the 24 months. Conclusion: The Animal models have shown promising results in preventing cognitive decline in AD. However there has been poor translation between animal studies and human trials. Long term studies are needed to evaluate the safety and long terms effects of these interventions. Further studies that mimic AD in humans are needed. A successful translation in human trials would be a giant step forward in the treatment AD leading to improved quality of life.

No. 168

Neuropsychiatric Workup of Well-Formed Visual Hallucinations in Three Older Adults With Varied

Histories of Psychosis
Poster Presenter: Shane Verhoef
Co-Author: Albert Nguyen, D.O.

SUMMARY:
While well-formed visual hallucinations are a well documented component of schizophrenia, they can also be an indicator of neuroophthalmic dysfunction and have many etiologies. For this reason, it is often difficult to determine the level of suspicion to warrant further neuropsychiatric workup in patients with history of psychosis experiencing complex visual hallucinations. We present three cases of patients with strikingly similar well-formed visual hallucinations (VHs) who carry quite different histories of psychosis. One high functioning patient with a lifetime of isolated paranoid delusions developing VHs following head trauma, one patient with schizoaffective disorder presenting extremely agitated and disorganized and another patient with a history of isolated VHs who presents with dementia secondary to cerebral amyloid angiopathy. Each of these patients reported several well-formed visual hallucinations of sexualized content with an unclear path toward neuropsychiatric workup. We will present the findings and explore possible etiologies while highlighting the deficits in knowledge regarding the appropriate diagnostic testing and the lack of known conditions to confidently account for these presentations.

No. 169
Caregiver Burnout: Application of Dialectal Behavioral
Poster Presenter: Theresa Toledo, M.D.

SUMMARY:
Caregiver burnout is a well-documented phenomenon in geriatrics, but there is minimal information on effective interventions. Up to 50% of caregivers have been shown to experience significant psychological distress which can escalate to burnout, depression and anxiety. This is especially problematic in caregivers of patients with cognitive and functional impairments, and these caregivers are at increased risk of psychological distress and poor overall health. There is some evidence showing benefit with Mindfulness-Based Stress Reduction and mixed results from technology-based interventions. Herein, we describe a study where we will screen for burnout using surveys including the Zarit Burden Scale, then compare two voluntary groups of caregivers who present to the geriatric psychiatry outpatient clinic. The experimental group are those that agree to view a 20-minute video that educates patient on caregiver burnout risks and stress reduction strategies based on dialectal behavioral therapy (DBT). The control group will consist of those who opt out of watching the video. Both groups will be given a handout outlining material from the video, and will be monitored by surveys over 1, 3, and 6-month intervals. The goal of this study is to evaluate the impact of implementing a short, easily-administered intervention that caregivers may be able to view in the span of an office visit. DBT was chosen due to its evidence-based efficacy of enhancing mindfulness, distress tolerance and emotion regulation. The concepts used in this intervention are also being used in an intervention for physicians in training as a 90-minute workshop with positive results.

No. 170
Resolution of Severe Psychogenic Dysphagia With ECT in an Elderly Patient
Poster Presenter: Tom Kim, M.D.
Co-Authors: Tariq Allauddin Munshi, M.D., Maria Hussain

SUMMARY:
In this report we describe an 82-year female with a longstanding anxiety disorder who developed severe psychogenic dysphagia, leading to hospitalization due to failure to thrive. Over a course of 3 years, Ms. B initially complained of having to constantly clear the phlegm from her throat, which then progressed to dysphagia and eventually to a fear of swallowing and choking on her saliva. She underwent an extensive workup by a gastroenterologist, otolaryngologist and speech language pathologist that included flexible nasopharyngoscopy, upper GI series, barium swallow and video fluoroscopy. Investigations showed no anatomical or functional pathology to explain her fear/ inability to swallow. Hence, it was concluded that the dysphagia was psychogenic in nature. The geriatric psychiatry team in the community managed her symptoms initially with venlafaxine and then augmented with

risperidone with minimal benefit. She was admitted to the hospital with a BMI of 16.8, and a G-tube was inserted in order to manage her failure to thrive. Although her BMI subsequently increased to 20.1, her anxiety and fear of choking on her saliva continued to persist. The consultation-liaison psychiatry service in the hospital attempted to manage her symptoms with Mirtazapine, Duloxetine and Olanzapine in addition to Lorazepam. Despite this, she had minimal benefit in her symptoms, and additionally developed tardive dyskinesia secondary to the antipsychotics. Due to the side effects and the lack of efficacy of the medications, geriatric psychiatry and the medicine team collaboratively tapered and discontinued all psychotropic medications except Duloxetine, and a trial of ECT was considered to be the best option. In this poster, we describe for the first time the use of ECT to successfully manage a patient with pharmacological treatment resistant psychogenic dysphagia.

No. 171

Pimavanserin for Psychosis in Individuals With Parkinson's Disease: A Systematic Review

Poster Presenter: Silpa Balachandran, M.D.
Lead Author: Piyush Taparia, M.D.
Co-Authors: Rajesh R. Tampi, M.D., M.S., Geetha Manikkara

SUMMARY:

OBJECTIVES: The aim of this systematic review is to identify published randomized control trials that evaluated the use of pimavanserin for psychosis in individuals with Parkinson's disease (PD). METHODS: A literature search was conducted of PubMed, MEDLINE, EMBASE, PsycInfo and Cochrane collaboration databases for randomized controlled trials (RCTs) in any language that evaluated the use of pimavanserin for psychosis in individuals with PD. Bibliographic databases of published articles were also searched for additional studies. RESULTS: A total of two RCTs that evaluated the use of pimavanserin for psychosis in individuals with PD were identified. The first study showed that pimavanserin provided significant improvements in psychosis from baseline as evidenced by a decrease in the SAPS-PD scores when compared with placebo (37% versus 14%, P=0•0006). Patients in the pimavanserin group also had greater improvements CGI-S and CGI-I scores. Additionally, caregivers of individuals in the pimavanserin group reported a reduction in caregiver burden. Participants reported improvements on night time sleep and daytime wakefulness for pimavanserin when compared with placebo. The most common adverse effects were UTIs and falls in the pimavanserin group. A small but clear increase in QTc interval (a mean increase of 7•3 ms) without association to cardiac adverse events was noted in the pimavanserin group. Pimavanserin's treatment effects were not associated with exacerbation of motor disability, sedation or other safety challenges. In the second study, the pimavanserin treated group showed a statistically significant improvements in the global rating of hallucinations (P=0.02, effect size=0.58), persecutory delusions (P=0.009, effect size=0.41), ideas and delusions of reference (P=0.05, effect size=0.36) and global ratings of delusions (P=0.03, effect size=0.53) and thought disorder item of the UPDRS Part I (P=0.05, effect size=0.40) when compared to placebo. However on the principal measures of the efficacy of antipsychotic response to pimavanserin, the SAPS total domain score only showed a trend (P=0.09, effect size = 0.52). The most common adverse events in the pimavanserin group were somnolence, edema and an increase in blood urea nitrogen levels. The study showed that motor functions and activities of daily living were not adversely affected by pimavanserin when compared to placebo. CONCLUSIONS: Available evidence although limited, indicates that pimavanserin is generally well tolerated and is superior to placebo in improving delusions and hallucinations in individuals with PD psychosis at a dose which does not the impair their motor functions. However, more confirmatory studies are required before pimavanserin can be regularly recommended for the treatment of psychosis in PD

No. 172

Suvorexant for Insomnia in Older Adults: A Systematic Review

Poster Presenter: Silpa Balachandran, M.D.
Lead Author: Geetha Manikkara
Co-Authors: Rajesh R. Tampi, M.D., M.S., Piyush Taparia, M.D.

SUMMARY:

Abstract Objectives: The aim of this systematic review is to identify published randomized control trials that evaluated the use of suvorexant for the treatment of insomnia among older adults (?60 years). Methods: A literature search was conducted of PubMed, MEDLINE, EMBASE, PsycINFO and Cochrane collaboration databases for randomized controlled trials (RCTs) in any language that evaluated the use of suvorexant for treatment of insomnia in older adults. Bibliographic databases of published articles were also searched for additional studies. Results: A total of two RCTs that evaluated the use of suvorexant in older adults with insomnia were identified. The first study primarily assessed the safety and tolerability of suvorexant for up to 1 year with the secondary objectives of assessing the efficacy of suvorexant in improving subjective total sleep time (sTST) and subjective time to sleep onset (sTSO) over the first month of treatment. Suvorexant showed greater efficacy than placebo in improving sTST ($p<0.0001$) and sTSO ($p=0.0002$). Suvorexant was generally safe and well tolerated and most patients completed a full year of treatment. The most common adverse effect was somnolence that was reported in 13% of the participants. The second study primarily assessed sleep efficiency on night 1 and at the end of week 4 along with the secondary endpoints of wake after sleep onset and latency to persistent sleep. Suvorexant showed improvements vs placebo on the co-primary endpoints of sleep efficiency at night 1 (10 mg, $p<0.01$) and end of week 4 (10 mg, $p<0.001$). Dose-related effects were also observed for sleep induction (latency to persistent sleep) and maintenance (wake after sleep onset) at night 1 (10 mg, $p<0.001$) and at the end of week 4 (10 mg, $p<0.001$). Suvorexant was generally well tolerated and that the most common side effects were somnolence, headache dizziness and abnormal dreams. Conclusions: Available evidence although limited indicates that suvorexant improves subjective total sleep time, time to sleep onset, sleep efficiency, sleep induction and maintenance in older adults and is generally well tolerated.

No. 173

Hospice Care for a Chronic Mental Illness

Poster Presenter: Gwen A. Levitt, D.O.

SUMMARY:

The primary goal for most medical specialists is to cure the patient, if possible. Most psychiatrists accept the realization that the majority of the seriously mentally ill (SMI) patients do not always have full remission of their symptoms; rarely, if ever, is there a cure. There are a handful of articles in the literature that discuss palliative and end-of-life care in the SMI population. Most tackle the questions relating to competency to refuse care in end-stage anorexia or terminal medical conditions. Professionals in Australia have recommended a staging model related to palliative care provisions for SMI patients. Providers in the United Kingdom and Canada have also written about palliative care in relation to cost-to-benefit ratios and medical economics. Overall, the mental health community seems reticent to discuss and or confront the fact that the very patients they serve may eventually be faced with the need for end-of-life care directly related to their chronic psychiatric illness.

No. 174

Helping Patients Who Are Determined to Die

Poster Presenter: Keelan K. O'Connell, M.D.
Co-Authors: Edmund Grant Howe, M.D., Neda Kovacevic, M.D., Finis Taylor

SUMMARY:

Mr. A is a 30 year-old Caucasian male with a history of schizoaffective disorder refractory to multiple medications, borderline personality disorder, mild intellectual disability, and Hirschsprung Disease requiring stoma placement at age 8. He presented to the ER from a state psychiatric hospital after self-imposed dehiscence of his stoma site in a declared suicide attempt. Mr. A is well-known to the inpatient medical and psychiatric services due to his twenty-year history of frequent hospitalizations for his self-injurious behavior wherein he inserts foreign objects, including drinking straws, forks, and paper money, into his stoma as reported “suicide attempts” or unconscious efforts to cope with distress, communicate his feelings and “cry for help.” His behaviors have resulted in many adverse events, including GI surgeries and a hypoxic brain injury secondary to septic shock. The patient has required so many GI resections that the colorectal surgery team has determined that he has insufficient bowel remaining for any additional surgery should any

future self-injury result in damage severe enough to require surgery. As a result of this determination and of all psychiatric treatment having failed to result in meaningful improvement in the patient's condition or perceived quality of life, Mr. A and his father requested that the patient be given comfort measures only. Mr. A, along with his father, is refusing a surgery to close the wound site. He will die in time without this surgery. It is unclear whether Mr. A's self-injurious behaviors are motivated solely by a desire to end his life or are compulsive. This case raised a number of clinical and ethical issues within the hospital and it offers an opportunity to explore what is optimal treatment in "end-stage psychiatric care." In this poster session, we will discuss the key topics that arose during this patient's long, multi-hospital admissions course and explore core ethical considerations involved in this decision-making process. These will include: - The use of sliding capacity as the standard for life-ending decisions. - Balancing the principles of autonomy and beneficence when considering comfort care for a chronically suicidal, medically compromised patient. - The definition and use of psychiatric hospice care for refractory illness

No. 175

Completion of Advance Care Directives Among Psychiatric Patients in the Outpatient Setting

Poster Presenter: Sadaf Noor, M.D.
Co-Author: Myriane Isidore

SUMMARY:
"Completion of Advance Care Directives among Psychiatric Patients in the Outpatient Setting" Background: Making medical decisions and contemplating how to live the rest of our lives can be paralyzing and mind-boggling. However, it is crucial to discuss such issues because we could end up in critical situations where we are unable to make medical decisions for ourselves. Advance Care Directives (ACD) is a legal document that specifies what actions should be taken in the event that one is unable to make medical decisions due to incapacitation or illness. ACD allows the individual to appoint a health care proxy in order to make sure that his/her wishes are met. To our knowledge, there hasn't been a study done regarding completion of ACD in psychiatric patients however there are several studies that have been conducted in the general population regarding the importance of completing an ACD. The study found that out of a total 7946 respondents, 2093 (26.3%) reported as having completed an ACD and 5853 (74.3%) do not have an ACD. The most common reported reason of not having completed one was "I don't know what an advance care directive is". Objective: The primary aim of this study is to determine how many patients with mental illness such as Schizophrenia, Schizoaffective Disorder, Major Depressive Disorder, Bipolar Disorder, Anxiety Disorder and Substance Use Disorder will complete an ACD's. The secondary aim of the study is to educate psychiatric residents about the importance of having their psychiatric patients appoint a health care proxy to make medical decisions for the patient in case the patient is unable too. Methods: This study is a prospective cohort study, which will be conducted in the Adult Outpatient Psychiatric Clinic of Brookdale Hospital Medical Center (BHMC). The aim is to educate and develop the understanding of ACD/HCP in the patients with mental illness in an academic medical setting. We will ask the patients to complete the Advance Care Directives (ACD) form. We will use the health care proxy form validated by NYS department of health, which includes identification of the patient, appointment of health care agent, alternate health care agent (optional) and health care directives including organ/tissue donation. Patients will be educated about ACD and if they understand, we will ask them to complete the form. Data will be collected regarding how many patients with mental illness is able to complete the ACD form by successfully appointing a health care proxy. An in-service will be provided to the psychiatric residents in the AOPD to educate them about what an ACD is and about the importance of having their patient's appoint a health care proxy. The data will be statistically analyzed to determine how many patients were able to complete ACD. Results: The study commenced on July 2017 and will end on October 2017. Data is still being collected.

No. 176

Examining the Role of Palliative Care in a Patient With Chronic Mental Illness

Poster Presenter: Marissa O. Goldberg, D.O.

SUMMARY:

Ms. B is 62 year-old Caucasian female, with history of unspecified depression, anorexia, irritable bowel syndrome, intestinal-genital tract fistula, and failure to thrive, who presents to the ED with worsening diarrhea. She had recently been seen in the ED multiples times, for complaints of abdominal pain with diarrhea, prior to admission. CT scan without contrast revealed colitis, but further delineation of her colitis could not be made secondary to refusal of multiple diagnostic tests. The patient was admitted to the general medical floor for treatment and psychiatry was consulted by the primary team for change in psychotropic medication. Upon initial evaluation, Ms. B was irritable and provided minimal history, but endorsed multiple symptoms of depression. It was recommended for her to continue her current dosage of Remeron. She continued to refuse medications and medical care during her hospitalization. The patient's condition deteriorated and psychiatry was consulted again, this time to evaluate decision-making capacity regarding treatment. After a thorough evaluation and two second opinions, the patient was determined to lack capacity. Ultimately, the patient's brother assumed control of her treatment. The patient was made DNR/DNI and treated with comfort measures. Upon discharge, she returned to her nursing home with hospice care. This case touches on the sensitive issue of when to consult palliative care in a patient who suffers from chronic mental illness. Little research exists on the role of palliative care in non-cancer patients. This poster will further examine how palliative care can be utilized in patients suffering from chronic mental illness that is hindering medical treatment.

No. 177

Is It Physical Pain, Mental Pain, or Both? How to Assess and Treat Pain in a Patient With Borderline Personality Disorder

Poster Presenter: Marissa O. Goldberg, D.O.

SUMMARY:

SO is a 40-year-old Spanish-speaking only female, with history of borderline personality disorder, who presents via EMS for suicidal ideations, after she was found on a bridge mutilating herself. Patient reported increased depression, anxiety, and auditory hallucinations, as well as recent relapse on alcohol. Patient was admitted to an inpatient dual diagnosis unit, and placed on a 1:1 due to agitation and self-injurious behavior. On initial interview, the patient reported unbearable pain, out of proportion to presentation, and requested narcotics. She admitted to chronic lower back pain and also reported a new diagnosis of uterine cancer. She denied consent to contact the prescriber of her pain medications, or any physician involved with her care and treatment of cancer. Due to unit policy of not being able to confirm a prescriber of medications, or the diagnosis of cancer, she was unable to receive controlled substances. She received intensive group and individual therapy and trials of gabapentin and acetaminophen. She constantly reported extreme discomfort as well as mental distress secondary to her pain. The patient reported no improvement of pain on a daily basis as well as upon discharge. This case presents several issues pertaining to how to adequately assess a patient's pain and help to stratify its origin. This poster also aims to examine how to better assess pain in patients with borderline personality.

No. 178

Case Report Highlighting the Importance of Psychiatric Screening Prior to Spinal Cord Stimulator Implantation

Poster Presenter: Bruce Bassi, M.D., M.S.

SUMMARY:

Patient selection for spinal cord stimulator (SCS) implantation is a complex problem fraught with many challenges. This case report highlights the need for a consensus regarding exclusionary criteria for SCS implantation. Despite the fact that SCSs have been used for roughly 50 years for the treatment of chronic pain, psychiatric screenings have only been mandated for the last two years. Furthermore, there is significant variability of what screening tests are used, and what is done with those test results. A recent, comprehensive review of biopsychosocial risk factors related to poor SCS outcomes suggested a number of exclusion criteria, however many of these psychosocial variables exist among a spectrum, which still leaves much ambiguity when assessing risk. Additionally, most would agree that "active" psychosis or mania would be an absolute

contraindication, but there is little guidance for individuals with well-controlled, previously severe episodes of mania. To further complicate this subject, there have been a number of published articles that claim that outcomes are actually more favorable in individuals “high in joy and mania” as they may be associated with greater optimism and fewer symptoms of depression. This case report of a 45-year-old woman who carried a diagnosis of bipolar I with psychotic features at the time of SCS implantation due to multiple manic episodes which started nine years prior to the implantation. Given the risks involved in removing the SCS, it remained in place for the following 11 years and became the focus of numerous somatic delusions and complaints. It is unclear to what extent the SCS complicated an already complex underlying psychiatric illness, but nonetheless, she has had at least 6 admissions to psychiatric facilities and state hospital in the last two years alone, and two admissions longer than five months each. Even under these most recently established guidelines, her psychiatric history would not have disqualified her, because she was not manic at the time of the evaluation. Chronic pain patients who are considering a SCS have usually previously failed conservative management, and are desperate for relief. Implantation of a SCS is a stressful procedure that, as this case highlights, has the potential to exacerbate pre-existing psychiatric diagnoses. This case supports the idea that all candidates should undergo a comprehensive psychiatric evaluation to help predict and reduce psychiatric complications of SCS implantation as well as enhance practice guidelines for SCS implantation.

No. 179

Postoperative Pain Management of the Opioid-Dependent Patient

Poster Presenter: Christine A. Annibali, M.D.

SUMMARY:

Introduction: Recidivism caused by postoperative drug-induced impairment is prevalent among patients who are opioid dependent. This literature review focuses on alleviating readmission, simply by analyzing one solution – detoxification. Methods: The study is a literature review of all of the detoxification studies that have been performed in the cardiac, orthopedic, transplant, and other surgical subspecialties. Furthermore, within the various fields of surgery, we looked at three demographic groups: non-detoxed opioid-naive patients (control), non-detoxed opioid dependent patients, and opiate-dependent patients who have been detoxed. A PubMed search was conducted looking at several keywords related to postoperative pain management. Results: A total of ten articles were obtained from the literature review with the following breakdown: cardiac (2), orthopedic (2), transplant (2), and miscellaneous (4). Outcome measures, such as amount of opiate use for pain management postoperatively, length of stay, and cost confirmed the benefits of detoxification within these groups. Gaps in the review were primarily in cardiac surgery, where studies were limited in discussing postoperative pain management. Moreover, only two groups were thoroughly compared: non-detoxed opioid-naive patients (control) and non-detoxed opioid dependent patients. The literature did not include opiate-dependent patients who have been detoxed. Conclusions: There is limited research on the topic of pain management, specifically in the opiate-dependent patient population. Due to limited research and gaps within the field, there is a great need for further investigation.

No. 180

Ketamine-Induced Malignant Catatonia and Treatment With ECT in the ICU Setting

Poster Presenter: Ateaya Ali Lima, M.D.
Co-Authors: Georgios Petrides, M.D., Prathyusha Reddy

SUMMARY:

The patient is a 63 years old Woman with past psychiatric history of Bipolar Disorder type II, no prior psychiatric hospitalizations, no prior history of catatonia or psychosis, and with past medical history significant for vaginal cancer (30 y/a), s/p urostomy, nephrectomy, and ileostomy, multiple bowel obstructions and resulting chronic unremitting pain. She underwent treatment with IV Ketamine for pain and developed catatonia post infusion. Catatonia progressively worsened and the patient was hospitalized in the MICU for hyperkalemia, metabolic acidosis, and autonomic instability. She

was noted to have a score of 21 on the on the Bush-Francis catatonia scale at the time of admission. The patient did not improve after administration of high dose of Ativan and developed aspiration pneumonia and worsening autonomic instability after two days in the ICU. Consultation and Liason team diagnosed patient with malignant catatonia and arranged to administer bedside ECT in the MICU. After one treatment, tachycardia and hypotensive episodes resolved and the patient began to speak. After the second treatment with ECT, catatonic symptoms resolved completely and the patient was transferred out of the ICU. The patient was back to her psychiatric baseline within one week and was discharged home.

No. 181

Loin Pain Hematuria Syndrome: A Clinical Enigma in Psychiatry

Poster Presenter: Neha Pawar

SUMMARY:

Loin Pain Hematuria Syndrome (LPHS) is a rare condition first described in the literature in 1967. No definitive diagnostic tests exists for the syndrome; rather it is a diagnosis of exclusion. Due to limited awareness regarding LPHS amongst clinicians, it is often misdiagnosed as a somatization disorder .Increased awareness about LPHS could lead to earlier diagnosis and immediate treatment preventing the consequence of severe debilitating pain. Clinically, LPHS includes periods of severe uni- or bilateral loin pain, accompanied by (microscopic) hematuria. Multiple theories regarding etiology suggest the possibility of LPHS a variant of vaso-spastic disease, or secondary to irregular deposition of C3 complement component in renal arterioles. In this poster, we attempt to provide an overview of the topic and propose a list of essential investigations so as to prevent the misdiagnosis of somatization disorder. We hope to familiarize our colleagues with the range of salient psychopathological features associated with the syndrome with the help of two case reports.

No. 182

Psychometric Properties of the Turkish Version of the Illness Management and Recovery Scale

Poster Presenter: Fatma Yasemin Kutlu

Lead Author: Selda Aydin Polat

Co-Author: Bulent Kadri Gultekin

SUMMARY:

Background: The Illness Management and Recovery (IMR) program is aimed at promoting recovery through teaching clients with severe mental illnesses such as schizophrenia. The Illness Management and Recovery Scale" (IMRS) have been developed to monitor the clients' progress towards recovery and better illness management. The previous study has established good reliability and validity for IMRS among patients with severe mental illness. Methods: This study was conducted using a descriptive and correlational design in order to determine the psychometric properties of the Illness Management and Recovery Scale (IMRS) in patients with schizophrenia. The study was conducted between January and March 2017 in Psychiatric and Neurological Disorders Education and Research Hospital, Istanbul, Turkey. The data of this study recruited 75 patients with schizophrenia. In the study, a questionnaire form developed by the researcher and Illness Management and Recovery Scale were used. The Erenkoy Psychiatric and Neurological Disorders Education and Research Hospital Ethical Committee approved the methods of the study. Patients participating in the study and their family members were informed according to the Helsinki Declaration and their written and oral consents were received. Results: The standard forward–backward procedure was applied in the translation of the IMRS from English to Turkish. Item relevance and content validity of the translated version of the IMRS was tested by an expert panel. The CVI was found to be 0.93. The mean participant age was 41.6 ± 10.9 years (18–65 years), 60% (n = 45) were male, 60% (n = 45) were never married. The alpha coefficient for scale was 0.78, and the split-half reliability of the IMRS was 0.71. Conclusion: In the present study, we found that the Turkish version of the Illness Management and Recovery Scale is a suitable instrument for the Turkish population. This study was supported by Istanbul University Scientific Research Project.

No. 183

Resilience and Coping With Mental Disorders During Concurrent Hearing Impairment

Poster Presenter: Mona Abdel-Hamid

SUMMARY:
Resilience and coping with mental disorders during concurrent hearing-impairment Mona Abdel-Hamid, Miriam Basilowski, Kathleen Tretbar, Norbert Scherbaum, Michael Fuchs, Jens Wiltfang, Bernhard Kis Objectives Studies have proven that the hearing-impaired show higher prevalence rates for mental disorders. At the same time, however, this restriction leads to poor access to the health system. Current scientific research has identified various factors contributing to an increased vulnerability for mental disorders during simultaneous hearing-impairment. These factors comprise violent experiences in childhood, onset and extent of the hearing-impairment as well as reduced quality of life. Furthermore, recent therapy research on "resilience" and "protective factors" has identified another important contributor for the development of mental disorders. Besides amount / severity of stress, the "processing styles" of an individual also influences to what extent a mental disease can develop. Methods The data presented in this APA poster were collected among hearing-impaired clients with and without a history of mental illness. Data were collected with the help of paper-pencil tests. Our analysis is based on protective factors, specifically focusing on motivational differences, regulation of emotions and self-efficacy. Results The aim of this study is the conceptual elaboration of a successful management of restrictions with simultaneous hearing loss.

No. 184

Stress Levels in Psychosis: A Comparison Between Stabilized Psychotic Patients and a Control Group From the Community

Poster Presenter: Pablo M. Gabay, M.D.
Co-Authors: Monica D. Fernandez Bruno, M.D., Alberto Montenegro

SUMMARY:
Background: The conceptual model of vulnerability-stress-protective factors proposes that stress plays a key role in schizophrenia and has been the basis for psychiatric rehabilitation of people with severe mental illness (SMI) [1] [2] [3]. Methods: The psychophysiological coherence model of Cardiac Coherence (CC) [4] -in which different emotions are reflected in state-specific patterns in the heart's rhythms- allows having a measure of stress, and shows the autonomic system balance [5] (Figure 1). Higher CC reflects increased parasympathetic coherence and less stress, while lower CC depends on sympathetic activity and shows more stress [5]. In this study, we compared the CC in a group of 22 stabilized patients with SMI living in a halfway house and participating in a Psychiatric Rehabilitation Program with the CC in a group of 31 non-psychotic outpatients and people from the community. The Clinical Global Impression Scale (CGI) and its Severity -CGIs- and Change -CGIc- subscales were taken to assure the psychotic condition. 8 AM Morning blood cortisol was performed to assess biological stress; Trier Social Stress Test (TSST) (Psychological and Physical stresses) [7] [6] was used to measure cardiac coherence (Tables 3 and 4). RESULTS: (Tables 3 and 4, Figure 2). Average morning blood cortisol was higher in controls than in patients (17.98 µg/dl vs. 16.62 µg/dl, respectively), showing lower morning level stress in the latter. Patients showed higher reaction to and better recovery from the physical than the psychological stress challenge. Controls showed higher reaction to psychological stress challenge and the same rate of recovery from physical and psychological stress challenges. Cardiac coherence in patients showed better recovery from physical than from psychological stress challenges. Controls showed no differences. There were significant statistical differences ($p>0.05$) between patients and controls in low and medium cardiac coherence during the psychological stress challenge, and in systolic blood pressure, both in basal line and after the psychological stress challenge. There were also statistical significant differences both in systolic and diastolic pressure between patients and controls after the psychological stress challenge. These differences also repeated after the physical stress challenge, with differences in heart rates. There were also differences in diastolic blood pressure during the physical stress challenge. CONCLUSIONS: We have not found higher sensitivity to stress in psychotic patients versus controls in this sample. Instead, it was the opposite. Even that this sample is too small to give definitely conclusions, it shows that it is possible to build institutions and programs with environments and treatments that allow having

stress factors under control for people suffering from SMI during long periods of time [8].

No. 185

Caring for Caregivers: Understanding and Meeting Their Needs in Coping With First-Episode Psychosis

Poster Presenter: Rachel Dillinger

SUMMARY:

Background: The first episode of psychosis is a trying time for both those diagnosed and those who care for them. While the literature on how to best treat patients is plentiful, literature on how to best support their caregivers is more scarce and less conclusive. Objective: To conduct a literature review to better understand the caregiver experience, determine which interventions most effectively alleviate their burden, and examine which other factors may affect outcomes. Methods: Articles limited to the English language were retrieved from PubMed and OVID using the following search terms: first episode psychosis, schizophrenia, caregiver, intervention, and burden in various combinations. Discussion: Caregivers experience grief, guilt, and anxiety during this time. While concerned for their loved one, their own lives take a back seat and their mental and physical health are adversely affected. Some are better prepared to cope during this time and are typically warm, decisive, confident, and optimistic. Their families are organized and flexible. Others are less prepared to cope, and are more likely to have poor self-esteem, use avoidant coping strategies, and be overly critical. Their families are controlling and have difficulty with communication and balance. These are the people who stand to benefit most from interventions. In terms of effectiveness, the essential aspects of an intervention are psychoeducation, problem solving strategies, peer support, and clinician guidance. A higher level of interaction with facilitators and peers is associated with better results. With effective intervention, decreases in caregiver burden, reported depressive and anxious symptoms, and feelings of shame and isolation are reported. Further, patients experience fewer relapses. While the literature has yet to isolate the key factors in what makes an intervention successful, this review provides suggestions and further illustrates the need for more research in this area.

No. 186

Evaluation of Visual Contrast Processing in Adults With High-Functioning Autism Spectrum Disorder: No Electrophysiological Changes on a Cortical Level

Poster Presenter: Anna Bubl

SUMMARY:

Background: Altered perception of sensory and visual input is a typical characteristic of individuals with high-functioning autism spectrum disorder (ASD). Although an alteration in the visually evoked potentials (VEP) response in the occipital cortex has been documented in children, we saw no change in the visual processing on a very early level, acquired via pattern electroretinogram (PERG), in ASD adults. This study aimed to investigate possible electrophysiological correlates of visual contrast processing of ASD in adulthood at a later, occipital cortical response, level. Methods: 32 high-functioning adult ASD patients (mean age 39±2, 10 medicated with antidepressant), matched with 33 healthy control subjects (mean age 34.4±2.1), were recruited at the Dept. of Psychiatry of the Univ. Hospital of Freiburg (Germany), following a standardized diagnostic procedure congruent to the recommendations of the NICE Guidelines for Adult Autism. We derived the cortical response of the primary visual cortex on phasic reversing checkerboard stimuli (0.51°) of increasing contrast (Michelson contrasts of 1, 3.2, 7.3, 16.2, 36, and 80%) via VEP. The amplitude versus the contrast transfer function across groups was calculated with an ANOVA model (amplitude~contrast x group x medication). Correlations with ASD severity measured by the Autism-Spectrum Quotient (AQ) were calculated. Results: No significant group differences for our main outcome measure were revealed after correcting for age and medication. No correlation between the severity of ASD and our target measures was evident. However, a significant positive correlation of the social skills subitem of the AQ with a medial VEP amplitude was found within the ASD group. Conclusion: To our knowledge, this is the first study in a high-functioning adult ASD sample investigating visual contrast processing via VEP, in response to phasic reversing checkerboard stimuli. Our results are in line with no changes at the retinal level. Although the VEP reflects a later, thus top-

down, modulated response of visual contrast processing, adult ASD patients did not reveal significant changes compared to the control group. Interestingly, ASD individuals with fewer social skills showed higher VEP amplitudes on the electrophysiological performance, possibly indicating a slight impact of the disease severity concerning social issues. Medication had no significant effect on our measures. Since small checkerboard stimuli were presented in our paradigm, our data are not comparable to significant findings in pediatric ASD samples investigating higher spatial frequencies. Further systematic research is needed to understand visual information processing in ASD, especially regarding adulthood.

No. 187

When Genetic Testing Results in More Questions Than Answers in a Patient With Autism and Recent Onset of Psychosis

Poster Presenter: David M. Ash, M.D.
Lead Author: Garima Singh, M.D.
Co-Authors: Geetha Chandrashekar, M.D., Meelie Bordoloi, M.D.

SUMMARY:

Mr. W is a 13 year old Male with a history of Autistic Spectrum Disorder, Oppositional Defiant Disorder, motor and language delays, who presented to the clinic due to recent onset of psychotic symptoms. Psychiatric symptoms on presentation included increasing fits of rage over the past year, paranoia, auditory and visual hallucinations, placing objects in his rectum and bowel incontinence. Physical examination revealed dysmorphic facial features of elongated midface, narrow palpebral fissures mild micrognathia, and distal skeletal features of increased carrying angle, decreased supination, shortened 4th and 5th metacarpals with hyperconvex nails This constellation of findings were suggestive of Fragile X and Velocardiofacial Syndrome. On presentation, Mr. W was evaluated by Pediatric Psychiatry and Neurology as well as a geneticist. Genetic testing by whole genome array as well as whole exome sequencing did not reveal any copy number changes, or deletions that could reconcile the physical, developmental, and psychiatric findings. Prior to the involvement of psychiatry in Mr. W's care, he was managed by physicians in urgent care and occasional follow up by a primary care physician. Management by urgent care and intermittent primary care resulted in multiple medication trials over a short time-span, without success. The combination of multiple failed medications and inconclusive genetic testing, in particular, significantly demoralized Mr. W and his family members. Mr. W was prescribed Quetiapine and titrated up to therapeutic dose. Also, several psychosocial interventions were arranged including intensive education program and a para in the classroom. Mr. W continues to follow up in the clinic. He and his family have experienced relief from their demoralized state because Mr. W has shown significant clinical improvement. Rigid medication management and psychosocial interventions have made a dramatic impact in Mr. W's quality of life. Although genetic testing may be a useful tool to help identify etiology of clinical problems, unexplainable or equivocal results can contribute negatively to a patient's condition.

No. 188

Detecting Motor Deficits in Autism Spectrum Disorder Via Video Analysis

Poster Presenter: Behnoush Behnia

SUMMARY:

Background: Beside the core symptoms, motor deficits such as dyspraxia or abnormal gait are described as one of the characteristics of Autism Spectrum Disorders (ASD). Especially high functioning ASD patients report clumsiness and other symptoms of dyspraxia significantly more often compared to healthy controls. To our knowledge, so far no systematical investigation has been conducted to evaluate these motor deficits using an objective instrument. Objective: In the present study, we aimed to test the hypothesis that ASD patients show specific patterns of motor impairment compared to healthy controls (HCs). Methods: In our experimental study, we examined adult patients with a diagnosis of high-functioning ASD with an IQ > 85 matched for sex, age and IQ. In total, we examined 80 subjects (n ASD = 37, n HCs = 43). Participants performed eleven movement tasks that are well established as tests of cerebellar functioning and have been chosen in regard of morphological and clinical cerebellar impairments in

ASD. Throughout task performance, patients were filmed by the Microsoft Kinect® camera. This method has been evaluated in prior studies with patients suffering from Multiple Sclerosis and Parkinson's disease. Furthermore, we examined participants neurologically to test for possible motor impairments. Results: Preliminary analysis of our data indicate specific patterns of motor deficits in ASD compared to heathy controls. Detailed data will be presented at the APA Annual Meeting during Poster Presentations. Conclusion: Our preliminary results suggest that ASD patients suffer from specific motor impairments. The data reinforces knowledge of clinically described ASD motor abnormalities. Thus, video analysis appears to be a feasible instrument for detection of multiple motor deficits in ASD. This might furthermore hint to a therapeutic potential, e.g. as biofeedback therapy based on video analysis instruments.

No. 189

High-Frequency rTMS in Adults With Autism Spectrum Disorder and Depression: A Pilot Study

Poster Presenter: McLeod Frampton Gwynette, M.D.
Co-Authors: Melanie Gail Wiley, Erin Henneberry, Danielle Waulene Lowe, Hussam Alsarraf, Laura Lohnes, Philipp Summers, Jane Joseph, Gregory L. Sahlem, M.D., Mark Stork George, M.D.

SUMMARY:

Background: Patients living with Autism Spectrum Disorder (ASD) are at increased risk for multiple psychiatric co-morbidities including depression, which worsen function and quality of life (1). Repetitive transcranial magnetic stimulation (rTMS) is a non-invasive brain stimulation technique that is a FDA-approved treatment for Major Depressive Disorder (MDD). However, there is little data for the use of rTMS in ASD for the treatment of depression (2). We hypothesized a standard rTMS protocol for depression would reduce the depressive symptoms for adult patients with ASD and MDD. Secondarily, we investigated whether this treatment would also reduce core symptoms of autism in this population. Methods: Patients 18-65 years old with both ASD and MDD by DSM-V without any medication changes in the last month where eligible for an open label trial with a goal recruitment of 15 subjects. Once consented, 10 Hz rTMS at 100-120% of motor threshold was provided on the left dorsolateral prefrontal cortex (DLPFC) for 3000 pulses per session for 25 sessions. Pre- and post-rTMS assessments of depressive and autism symptoms were collected and preliminary analyses were completed with t-test of pre- and post-TMS behavioral tests. Results: To date, ten patients have been enrolled with seven completing the rTMS treatment, two withdrawing, and one currently undergoing treatment. Preliminary analyses of the seven patients with pre- and post-rTMS behavioral scores suggest a reduction in the Hamiliton Depression Rating Scale compared to baseline (-11.71±7.39, p=0.006). 5 of 7 participants had a "clinical response" defined by 50% reduction, and 3 of 7 participants were in "remission" (Hamilton?7) immediately after rTMS treatment. There was also a significant reduction in the informant-reported Aberrant Behavior Checklist (-29.29±18.81, p=0.006) with 5 of 7 participants having at least a 50% reduction in characteristic autism behaviors. Conclusions: Preliminary data from this novel open label trial of rTMS in Autism Spectrum Disorder and Major Depressive Disorder suggest an improvement in depressive and core autism symptoms after completion of a standard depression rTMS treatment series. Thus, rTMS may be a viable treatment option for both depression and aberrant behaviors in the autism population.

No. 190

Old Controversies and New Developments in Autism Spectrum Disorder

Poster Presenter: Patricia Ann Samaniego Calimlim, M.D.
Co-Authors: Gaurav Kumar, M.D., Emmeline Hazaray, M.D.

SUMMARY:

1 in 68 children are diagnosed with Autism Spectrum Disorder (ASD) Early identification is the most powerful tool to maximize a child's potential and make a difference in their lives. Popular old controversies misinforming the public about causal associations with ASD have consequently led to outbreaks of preventable childhood morbidities and perpetuation of misinformation regarding etiology, diagnosis, and prevention of ASD. Objectives of this poster are (1) to describe popular old controversies from 1998-2017 that have led to public

misinformation and resulting in childhood morbidities. most of which have been debunked by scientific findings against causal association for autism spectrum disorder and (2) to highlight major new developments from the last 5 years in neuroimaging and genomic technology in predicting and aiding early diagnosis of autism spectrum disorder. While children as young as 12 to 18 months may present with behavioral symptoms, with definitive diagnosis by 18 months, implementation of early intensive behavioral interventions can be efficacious in improving cognitive, adaptive and social communication outcomes in young children with ASD. Hence the importance of reviewing and flushing out decades of misinformation and causal misconceptions and highlighting recent scientific technological development to help in making appropriate, earlier diagnoses of autism, with the emphasis on earlier access to resources for individuals with autism.

No. 191

An fMRI Study on Neural Systems for Aesthetic Experience in Patients With Autism Spectrum Disorder

Poster Presenter: Seongkyoung Park

SUMMARY:

Objectives: Some patients with autism spectrum disorder (ASD) reported excellent performance in the arts or music field. In this study, we aimed to investigate whether ASD patients who do not have artistic or savant characteristics show differences from those of general population when they perform aesthetic judgements, and whether there are differences between these ASD patients and the general population in neural activity when performing aesthetic judgments. Methods: We recruited patients with ASD (n=17, ASD group) and healthy controls (n=19, HC group) for an fMRI study. All subjects were scanned while performing aesthetic judgement tasks with magnificent landscape images and fractal images. Differences in brain activation between groups were assessed by contrasting neural activity during the tasks. Results: In the ASD group, aesthetic judgment score of the whole images was significantly lower than that of the HC group. ($p < .029$) During aesthetic judgment task on the landscape images and on the fractal images, ASD group showed less activation in the superior frontal area than HC group, while the angular gyrus, inferior parietal lobule and insula were more activated in ASD group. In addition, during the aesthetic judgment task of the fractal images, ASD group exhibited greater neural activities in the amygdala and middle temporal gyrus (Brodmann area 37) than the HC group. Conclusion: This study suggest that when an aesthetic judgment is performed by ASD patient, the anterior system of the brain including the superior frontal area is less activated, whereas the posterior system of the brain including the parieto-temporal area is overactivated. Thus, the results of this study suggest that brain activity associated with aesthetic experience in ASD patients might be different from that of the general population.

No. 192

Dissociative Symptoms in a Patient Subsequent to Allegedly Setting Her Husband on Fire: A Case Report

Poster Presenter: Avneet Madan, M.D.
Co-Authors: Michael DiBiase, M.D., Ahmed Sherif Abdel Meguid, M.D., James Lloyd Levenson, M.D.

SUMMARY:

Dissociation is hypothesized to be a protective mechanism in which an altered state of consciousness manifests in reaction to tremendous psychological trauma. Symptoms characteristic of dissociation are an inability to recall autobiographical information, concurrent with confusion or distress. Social, emotional, and daily functioning are often impaired. Alternatively, feigning the symptoms of dissociation can and has been employed as a mechanism in attempting to avoid legal repercussion for criminal actions. We detail the case of a middle-aged female who presented with symptoms which were initially formulated to be the acute onset of a dissociative state following an incident in which she allegedly set her husband on fire. The patient's presentation was striking and consistent, insisting that she was an 18-year-old woman attending college in the 1980s. She was shocked by the notion of having a husband or children and denied knowledge of modern-day technology. The diagnostic formulation became complicated by behaviors during her inpatient stay;

in particular, the patient was not disturbed by her or her mother's physical appearances, even though they had matured well beyond the ages she claimed them to be. This case report focuses not only on the identification and diagnosis of dissociation, but also on the ramifications of this diagnosis related to forensic issues.

No. 193

Dissociative Fugue and Psychotic Symptoms in Undiagnosed Overt Hypothyroidism

Poster Presenter: Jenny Shen, M.D., M.P.H.

SUMMARY:

Ms. W is a 40-year-old Caucasian woman with a history of depression and PTSD admitted to our inpatient psychiatric unit with new-onset auditory hallucinations and persecutory delusions. It was then noted that she may have had at least one instance of dissociative fugue where she wandered around the city, obtained a taser, and tased herself. This information was obtained from police reports, but our patient stated she in fact had no intention of doing any of the reported acts, and cannot recall anything during that entire one-day period. She described the incident as "having a conversation with my daughter one evening… and the next thing I know I'm waking up in the hospital the next day." She states she may have had more than one such episode within the past year, as family members had told her she would do things she could not recall and that she would not characteristically do. Though she had had depression and PTSD for over a decade, she had never had any dissociative or psychotic symptoms until recently. She felt persecuted by a government agency and heard derogatory auditory hallucinations. In addition to an unintentional weight gain of 50 lbs in the past 5 months, she also endorsed fatigue, joint pains, and hair loss. She had no known history of hypothyroidism. On admission, TSH was obtained and came back as 194 uIU/mL (reference 0.27-4.20). Free T4 level was 0.23 ng/dL (reference 0.93-1.70). A thyroid auto-antibody panel was subsequently obtained, which showed elevated thyroglobulin antibody and thyroid peroxidase antibody, consistent with Hashimoto's thyroiditis and overt hypothyroidism. Levothyroxine was promptly started and she began to show normalization of her initially slow psychomotor activity and speech, improvement of low mood, and weight loss. Her working memory started to improve as well, and she did not have any additional auditory hallucinations, delusions, or amnestic episodes. Neuropsychiatric symptoms are well-known to manifest in overt hypothyroidism, including depression, memory deficits, psychosis ("myxedema madness"), even mania. However, there has not been a report of dissociative fugue linked to hypothyroidism. Hypothyroidism is common, especially in females and the elderly. Importantly, untreated hypothyroidism can impair quality of life, increase disabilities, and even progress to myxedema coma and death. Most neuropsychiatric manifestations of overt hypothyroidism are reversible with treatment; however, if the clinician does not maintain a high index of suspicion for an endocrinopathy, then the patient may be subjected to unnecessary psychotropic regimens and consequent side effects, in addition to delaying treatment of their underlying disease. This case serves as a reminder of the variability in neuropsychiatric manifestations of overt hypothyroidism and presents the possible presentation of it as dissociative fugue.

No. 194

A Case of Dissociation Characterized by Retrograde Amnesia, Change in Affect, and Neurocognitive Deficits

Poster Presenter: Josie Pokorny, M.D.

SUMMARY:

We discuss a case seen by the psychiatry consult service of a 48-year-old female who presented with worsening headaches and acute change in mental status eight days prior when she woke up in her home with prominent change in her memory, personality, affect, and functioning. She was unable to recall select autobiographical and episodic memories, for example, she did not recognize her current husband and believed her adult son was still a baby. Her personality and affect took on that of a young girl. She spoke with higher tone of voice, unusual prosody, and limited vocabulary. She exhibited child-like emotions. Family reported that physical and cognitive functioning was also affected with difficulty performing IADLs, complex tasks, or return to work. She endorsed depression and PTSD

symptoms. Relevant social history was a childhood marked by biparental verbal and physical abuse and severe sexual abuse as an adolescent. Physical exam was notable for unsteady gait and cognitive assessment with MOCA demonstrated cognitive impairment with a score of 14/30. Medical work-up included evaluation by the neurology consult service and CT head, MRI brain, EEG, and LP, all negative for pathology, and laboratory tests notable for CRP 15 and WBC 11.9. After the patient was discharged results for serum antibody testing resulted as positive for calcium channel antibodies, N-type, which has been demonstrated to cause limbic encephalitis. The working diagnosis in this case has been narrowed to an episode of psychogenic dissociative amnesia vs. organic amnesia related to limbic encephalitis. The outcome of this case is ongoing. We discuss the diagnostic challenges in identifying cases of encephalitis in a consult psychiatry setting.

No. 195

Acute Temporal Lobe Infarct Presenting With Dissociative Symptoms: A Case Report and Literature Review

Poster Presenter: Rebecca A. Olufade, M.D.
Co-Authors: Jacob Joseph Oyer, M.D., Walter Kilpatrick

SUMMARY:
Background: In the DSM-5, dissociative disorders are characterized by a disruption of the normal integration of consciousness, memory, identity, emotion, perception, body representation, motor control, and behavior. Dissociative symptoms can potentially disrupt psychological functioning. This case explores a patient who was found to have an organic pathology contributing to a constellation of symptoms mimicking a dissociative amnesia. Methods: A 54-year-old male presented to the emergency department after being found wandering his home in a state of acute confusion and disorientation. Psychiatry was consulted to evaluate for global amnesia and possible conversion disorder. On mental status examination, the patient was found to be distressed by his confusion and inability to remember events leading up to his clinical state. His thought process was significant for thought blocking and expressive language difficulty. Collaborative interdisciplinary team efforts were utilized in the work-up of this case. A longitudinal description is provided for the patient's condition and hospital course. Results: As part of the work-up for altered mental status, the medical team had ordered a CT and subsequent CTA of the head which revealed a large 1.3cm lobulated aneurysm at the left MCA bifurcation. Psychiatry consultation service advocated for EEG and MRI, which were obtained. EEG showed the presence of focal slowing seen over the left hemisphere, maximal over the left temporal region. MRI revealed an acute infarct involving the left temporal lobe extending along the periatrial white matter with suggestion of mild petechial hemorrhages. Discussion: The patient had an abrupt onset of confusion that was interpreted as psychiatric in origin. Thorough medical investigation revealed that a temporal lobe infarct was producing dissociative symptoms. Dissociative disorders are a classification within DSM-5 that should be considered when faced with a complex patient case presenting with altered mental status. Conclusion: It is important for Psychiatrists to be aware of dissociative symptoms that can arise from temporal lobe pathology to provide appropriate diagnostic treatment recommendations.

No. 196

"I Saw You Fixing the Cox Cable in My Apartment" Fregoli Delusion: A Disorder of Person Misidentification

Poster Presenter: Amarachi Nwaije, M.D.

SUMMARY:
Mr. B is a 66 year old, single, unemployed AA male with PPH of Schizophrenia and Cocaine use disorder in remission and PMH of HTN, who presented to the ER at the VA hospital for treatment of a laceration he sustained after being hit with an unknown object on forehead. Mr. B reported symptoms of psychosis like delusions of Control stating he believed that people were controlling his bowel movements and urinary frequency leading to multiple bowel movements per day and urinary frequency. He also reported he felt like he was being chocked whenever he ate or drank. He also reported ideas of reference when he is watching TV. Mr. B complained of "seeing people who look like me" and strongly believed they were him. Which cause him tremendous discomfort as he

became isolative and withdrawn on the unit. During meal time he would go to the dining but would not eat any meals. He reported "when I go to sit at my tray, People look at me as if it is not my food, maybe someone else that looks like me". Whenever he was told his Vital signs, he would say "I'm not sure that is mine it appears to be another patients who has my name and appearance." pointing to someone else. He also reported prior to being in the hospital, he was living in an apartment where he was paying his bill consistently until he stopped as he felt like "there was something fishy going on and I started seeing other people's mail/bills coming in my name so I stopped paying the bills" therefore his utilities got cut off. He also reported he stopped paying rent as when he went to pay his rent one of the months, the lady appeared was someone different and didn't pay after wards leading to his eviction. Pt states to one of the nurse on the unit "I saw you on crutches at the store" and the nurse states he has never met the pt. before. He also reported seeing his niece at his local bank where and states "she didn't say anything to me she just walked by". His son claims the niece would not be at the bank as she does not live close to the area. He also told the writer, "I saw you the cox cable in my apartment". He reported symptoms to be intrusive and bothersome. Treatment: Pt was started on Haldol 5mg and Titrated up to 10mg BID and Benztropine 0.5mg BID. Fourteen days into his admission he was given Haldol Dec 150mg IM. His symptoms gradually started resolving and became less intrusive and bothersome. This case also underscores the need for psychiatrists to be aware of this disorder as its initial presentation may appear as pt. is uncooperative/ paranoid and disorganized or malingering to get out of responsibilities. Also, this syndrome ass. with Traumatic Brain Injury.

No. 197

Mental Health Comparative Cost in a U.S. Air Force Basic Military Training Population

Poster Presenter: Christopher Jorgensen, M.D.
Co-Author: Joseph Mansfield, D.O.

SUMMARY:

Background: The United States Air Force recruits thousands of presumably healthy young men and women every year to fulfill vital roles in our nation's military. Despite strict screening measures currently in place, these recruits incur significant healthcare costs while in training . This study investigated healthcare costs associated with basic military training, focusing on costs associated with Mental Health services. Objective: To evaluate direct and indirect costs associated with Mental Health care of Air Force recruits in Basic Military Training. Methods: A de-identified database of psychiatric inpatient information and Freedom of Information Act (FOIA) data regarding U.S. Air Force (USAF) Basic Military Training healthcare costs in Fiscal Year 2015 was used to compile total and average cost per trainee for inpatient psychiatric services. The subjects were adults (18-39). Inclusion criteria was the need for inpatient psychiatric admission during basic military training. Results: In fiscal year 2015, the USAF spent $14,636,400 on healthcare for the 34,242 basic trainees. The vast majority (91%) was spent on care received in Military facilities, but 9% ($1.29M) was purchased in the local market. Of that, Mental Health made up 79% of purchased care expenditures. Conclusion: The costs associated with trainee healthcare are non-negligible. The costs associated with Mental Health care are the second largest healthcare expenditure for trainees and Mental Health makes up the vast majority of purchased care dollars for Basic Military Training. More research is needed to better understand possible ways to decrease the mental health burden on this target population.

No. 198

Is Combat Exposure a Risk Factor for Violence in Veterans?

Poster Presenter: Christopher W. Harris, D.O.

SUMMARY:

At this time, there is little understanding of the risk for violence by veterans of wars of different eras; specifically, if a service member or veteran has been exposed to combat. The various environments and other relevant factors unique to the military, such as war zone experience, PTSD, and other associated psychiatric disorders can lead to different outcomes in risk assessments for violence. One such case to exemplify is of a single 53M active duty infantry officer with two deployments totaling 30 months which included firing weapons as well as other means of violence of combat. Shortly after returning

from his last deployment, he noted difficulty adjusting being back in the United States, to include being sensitive to certain sounds, certain images, and feeling restless and on-edge in certain situations (e.g. large crowds, etc.), but never sought behavioral health treatment. He went on to develop nightmares and began withdrawing, isolating himself inside his home. Years after returning from his last deployment, he described an incident when he woke up in the middle of the night from a nightmare, thinking he was in Iraq. He pulled his firearm and shot off multiple rounds in his home, which resulted in the police being called. Shortly after this incident, he agreed to engage in behavioral health treatment. He was advised to get rid of his weapons, which he agreed to and he said he did. He intermittently engaged in treatment over the next year and a half, endorsing continued worsening symptoms despite various psychotherapeutic and pharmacotherapeutic treatments. One day, when leaving a doctor's appointment and on his way home, he felt threatened by another driver on the highway. Allegedly, he began speeding and driving erratically, and pulled a weapon on this other driver, who subsequently called the police. The police caught up to the patient and he was arrested. A few questions arose as this case evolved: (1) If a veteran has a history of combat-related violence, does that increase his overall risk of violence? (2) What other factors should be included in the unique veteran populations that could yield an increased risk of violence? (3) What screening should there be in veterans with a history of combat-related violence? (4) What interventions would be recommended in someone if they had identified risk factors for violence? (5) What treatment goals or measurable goals would we use to track an individual with increased risk of violence over time?

No. 199

Digital Ethnography of Veterans With PTSD Who Engage in Health Information-Seeking Behavior on the Internet: Implications for Etherapy

Poster Presenter: Damian Jacob Sendler
Co-Author: Mariusz Duplaga

SUMMARY:

Health information-seeking behavior on the Internet defines searching for answers on one's suspected (or diagnosed) medical condition. This study investigates (1) how U.S. veterans diagnosed with PTSD search for help online, and (2) seeks to define the scope of problems that affect their daily functioning. A selective search of the entire Internet, using the combination of keywords [veteran OR health OR discussion OR forum OR help OR va] was conducted on DEVONAgent Pro in mid-2017. Results yielded over 2932 hits — clusters of websites, published in English, where U.S. veterans engaged in health-oriented discussions. Based on pre-specified inclusion criteria, about 172 sites were selected for qualitative content analysis. Using grounded theory, combined with extraction of demographics — we archived, analyzed, and summarize all significant findings. Thematic analysis identified several themes explaining what kind of health information veterans seek to better understand their functioning with PTSD. These themes include going back to work, vitamin B12 deficiency, diabetes management, Prazosin treatment for nightmares, use of psychiatric service dog, marijuana addiction, sleep apnea, and anger management. In each of these categories, we were able to identify how symptomology of PTSD affects the quality of health information sought online. Furthermore, we collected ethnographic data that explain the "average," digitally-savvy veteran with PTSD who use the Internet to access health information related to psychiatric conditions, and why they are doing so. In the context of V.A. hospital services, we find that the inefficiency of primary and psychiatric care at these hospitals is responsible for prompting veterans to seek help on the Internet — either in addition to, or in lieu of care received at veterans clinics. We define the medical and administrative problems that compromise adequate access to services at V.A. clinics — told from the first-person perspective of participants. Lastly, we define usability of analyzing digital help-seeking behavior in designing and implementing the Internet-based telehealth counseling programs. U.S. veterans with PTSD increasingly use the Internet to engage in health information-seeking discussions. This study shows an innovative way of identifying health concerns of veterans through retrospective text analysis of prior conversations. A subsequent step in health prevention is to reach out to veterans and offer them a targeted survey that might help us uncover more details about challenges surrounding

the quality of psychiatric and general medical care offered at the V.A. facilities. Importantly, this platform of digital ethnography is a pre-requisite step in developing Internet-based interventions, including health platforms - for managing post-deployment veterans diagnosed with PTSD.

No. 200

The Soldier's Heart: A Resource to Improve Understanding of Posttraumatic Stress and Help Improve Veteran's Lives

Poster Presenter: James Mooney

SUMMARY:

Post Traumatic Stress (PTS) in military veterans is a modern health epidemic in the US. It is estimated that up to 20% of Operation Iraqi Freedom (OIF) veterans and 15% of Vietnam Veterans have PTSD in a given year. Furthermore, it is estimated that the actual prevalence of PTS is significantly higher, with up to 30% of Vietnam Veterans suffering from PTS in their lifetime1. Lack of understanding about PTS symptoms, difficulty in finding connections to available community resources, and avoidance of discussing these sensitive topics in healthcare settings all contribute to veterans not accessing the care that they need. Thus, the mission of The Soldier's Heart project will be to provide a comprehensive website that allows veterans, families, providers, and communities to understand the PTS through each other's perspectives, learn of treatments both evidence based and alternative, and better communication between those affected and those who treat them. The Soldier's Heart will utilize short videos, presented by fellow veterans, doctors, caregivers, and families, to communicate personal stories and struggles as well as provide understanding into this exceptionally complex topic. In this way, the Soldier's Heart will work to bridge healthcare gaps between veterans and the resources available for them, with the goal of providing a more comprehensive understanding of PTS while simultaneously connecting patients to resources in their community.

No. 201

Case Report of Graves' Disease and Schizophrenia

Poster Presenter: John A. Lee, M.D.

SUMMARY:

Mr. T, a 32 year old Caucasian male with a past diagnosis of schizophrenia and diabetes mellitus type 1 presents to the Emergency Department after punching his uncle who was driving at the time. Patient had recently been psychiatrically hospitalized 8 months earlier for similar complaints, assaulting his father and mother in the setting of paranoia and psychosis. Patient's father reported that the patient had been adherent to medications and outpatient follow up but continued to exhibit worsening psychotic symptoms. In the hospital, the patient remained violent and psychotic despite trials of various anti-psychotics, anxiolytics and mood stabilizers. The plan was to trial lithium to treat his aggressive behaviors and thyroid studies were obtained prior to initiation. He had a very low TSH and a high free T4. His thyroid stimulating immunoglobulin level was elevated and he was diagnosed with Graves' disease. He was initiated on methimazole for his thyroid condition and his violent behavior ceased and his psychotic symptoms lessened. The last thyroid studies were obtained from 5 years prior, as a part of the initial work up for first break psychosis which did not show any abnormalities. Currently there are no ADA/APA guidelines regarding thyroid studies. This case illustrates that patients with schizophrenia may continue to require thyroid studies as part of their psychiatric care. Furthermore, the index of suspicion should be elevated in schizophrenic patients with diabetes mellitus type 1 as there is an auto-immune mechanism related to both diabetes and thyroid disease. Considering that schizophrenic patients will have exacerbations of their illness with symptoms that overlap with symptoms of hyperthyroidism, it may be prudent to perform an annual TSH or if they have an exacerbation of their psychosis.

Poster Session 4

No. 1

Extended Psychosis Following Methamphetamine Use: A Case Series and Review of the Literature

Poster Presenter: Ruthie Cooper

SUMMARY:

Methamphetamine is produced using chemicals including pseudoephedrine, battery acid, and

antifreeze, and can produce psychiatric symptoms such as increased energy, irritability, and decreased appetite and sleep. Residual damage to dentition, memory, and solid organs such as the heart and kidneys can occur, although the mechanisms of such damage remain poorly understood. A dose-response relationship between methamphetamine use and psychotic symptoms has been established but little information has been published on the total duration of such symptoms. Lifetime prevalence of meth use in the United States is estimated at 6.4%, with nearly half a million individuals estimated to use per month. We present a case series of prolonged psychosis with paranoid features induced by methamphetamine ingestion, in individuals with no personal or family history of psychotic disorder. These cases serve to address the topic of prognosis and duration of psychosis associated with meth use.

No. 2

White Matter and Bile Duct Changes in a Patient on Chronic Methadone Maintenance Therapy

Poster Presenter: Sebastian Cisneros, M.D.
Co-Author: Douglas Opler, M.D.

SUMMARY:

Introduction: Emerging evidence suggests that long term methadone use may lead to adverse effects. White matter damage has been seen in the superior and posterior corona radiata, and the posterior limb and retrolenticular internal capsule (1). Radiological studies show increased bile duct diameter in patients on chronic methadone maintenance compared to controls (2). A high rate of constipation is seen in these patients (3). We present a case which highlights potential medical adverse effects of chronic methadone therapy. Case Report: Mrs. A is a 40-year-old female with opioid use disorder on maintenance treatment with methadone 175mg/day, cocaine use disorder in full remission, depression, and gastric bypass. She presents to the hospital with lethargy, intermittent diffuse abdominal pain in the right upper quadrant, fatigue, poor oral intake, bilateral foot pain and paresthesias, chronic constipation and unintended weight loss. Before admission, she was diagnosed with systemic lupus erythematosus, multiple sclerosis and hemochromatosis. She was admitted to medicine. Autoimmune profile, hepatitis panel, cryoglobulins, HIV screen, RPR, zinc, copper, iron, vitamins, blood and urine cultures and EMG were unremarkable. Ultrasound showed common bile duct dilation of 9mm, confirmed on MRCP. HIDA scan was negative for cholelithiasis. Liver biopsy showed moderate to severe fatty change. MRI showed two 2 to 3mm subcortical white matter T2 hyperintensities on the left anterolateral corona radiata and superomedial frontal lobe. Discussion: Opioid use disorder is a dangerous illness, the course of which can be mitigated by opioid maintenance therapy, including methadone, which has helped many patients to successfully manage the illness. Long-term methadone use has its own risks, however. A knowledge of these can assist clinicians in choosing between alternative treatments of opioid use disorder, such as naltrexone or buprenorphine. Conclusions: Options for long-term management of opioid use disorder should take into account the potential long-term adverse effects of methadone maintenance, including white matter changes, bile duct dilation, and chronic constipation. When methadone is chosen as the therapy of choice, the clinician should be alert to these potential adverse effects so as to properly recognize and address them.

No. 3

Recent Discoveries in the Neuroinflammatory Process of Alcohol Abuse

Poster Presenter: Shram Dinesh Shukla, M.D.
Co-Authors: Lan-Anh T. Tran, D.O., Vanessa E. Freeman, M.D., Corinde Wiers

SUMMARY:

The neuropathology of alcohol addiction involves well-known brain structures and neuroinflammation may explain the neurotoxic effects of alcohol abuse. We aim to review the last few years' worth of research in neuroinflammation and alcohol abuse in an effort to summarize the recent findings. Neuroinflammation is a process by which microglia, the resident immune cells, are activated in response to CNS injury.1 Imaging studies have provided insight into microglia's activity by studying its activation through the translocator protein, TSPO, in PET imaging scans. Such neuroimaging has revealed a relationship between microglial activation and neuropathology in depression, psychosis, cocaine

abuse and even methamphetamine abuse.2-5 When examining recent literature on neuroinflammation in alcohol abuse, animal models have provided a baseline understanding that alcohol induces NRLP3-inflammasome pathways and Mitochondria-Reactive Oxygen Species (ROS) in cultured microglia cells.6 Interestingly, other recent studies reveal that: 1) ethanol may mediate neuroimmune expression through dosing (rather than loading), 2) binging patterns of alcohol abuse upregulated neuroinflammatory pathways but certain genetic knockouts protected these animals from alcohol-induced neurotoxicity, 3) alcohol deprived mice displayed anxio-genic behaviors but also certain genetic knockouts protected these animals from displaying such behavior, and 4) chronic alcohol abuse was associated with higher levels of neuroinflammatory markers in locations such as the hippocampus and cerebellum.7-11 Few recent studies have looked at human subjects, but one study analyzed induced pluripotent stem cells, iPS, and neural progenitor cells, NPCs, finding that ethanol exposure resulted in NRLP3-inflammasome pathways and a subsequent decrease in the number of mature neurons.12 If clear biological markers elucidate, even if only in part, the underlying mechanism of alcohol addiction and its downstream effects, then they also provide an intriguing point in the process for potential intervention. With the rise of immunomodulators, targeted pharmacotherapy may be a part of the answer for treating alcohol abuse and addiction moving forward. Nevertheless, recent advances continue to build upon our understanding of alcohol addiction and further contribute to the study of neuroinflammation.

No. 4

Synthetic Cannabinoids: Fake Pot; a Potential Threat

Poster Presenter: Sumayya Binth Ayaz, M.D.

SUMMARY:

The use of synthetic cannabinoids (SC), commonly known as “K2”, or “Spice” is alarmingly high, especially among young people. 11% of high school students in U.S reported using K2, making it as the second most frequently used illegal drug among high school seniors after marijuana. (1) Originally produced to treat medical conditions SCs were later used by clandestine laboratories that modified the chemical products and marketed it as herbal mixtures. K2 became widespread because it is easier to obtain, cheap, highly potent, and is not detected on regular toxicology screen (2). Many teenagers are drawn to it because of the misperception that spice products are natural and therefore harmless. But the real picture is far from that perception. Synthetic cannabinoids detected in this herbal mixture has shown to be more potent than tetrahydrocannabinol, the primary psychoactive compound in Marijuana, resulting in serious medical and psychiatric adverse effects including vomiting, hypertension, and tachycardia, shortness of breath, seizures, anxiety, agitation, paranoid behavior, hallucination and suicidal ideation. The U.S Drug Enforcement Administration classified most prevalent SC as controlled substances but this regulatory effort is complicated by 1) Continuous change of chemical component by the clandestine laboratories and 2) Lack of a standardized test to detect the synthetic cannabinoids. This review poster highlights the emergence of SC abuse; describes the adverse effect of these products, the barrier to legal regulation and the need to develop a standard screening test to identify the products

No. 5

Meeting the Challenges of Heroin Addiction in the Tribal Areas and Peshawar, Pakistan: A Nongovernmental Organization’s Observations and Experiences

Poster Presenter: Tariq Mehmood
Co-Author: Rohul Amin, M.D.

SUMMARY:

The Golden Crescent, a region encompassing Afghanistan, Pakistan and Iran continue to be devastated by the heroin endemic. The geopolitical influence of wars and political instability has led to Afghanistan becoming the lead producer of illicit opium in the world. Pakistan’s Federally Administered Tribal Areas (FATA) and the capitol of Khyber Pakhtunkhwa (KPK) province, Peshawar lie on the cross-roads from Afghanistan where the historical silk road once existed. Due to the easy and cheap availability of heroin and other drugs, the addiction to these is now endemic. This is among a region that already suffers from severe poverty,

political instability and resource-constraints. The region naturally relies on Non-Governmental Organizations (NGOs) such as ours to tackle this challenge. We attempt to provide a shared mental model of this problem by sharing our experiences treating heroine and other illicit substance addictions in this region as the largest NGO. We rely on unique protective factors associated with Pashtoon tribal and collective extended familial factors, Islamic religious and spiritual interventions, and modern detoxification methods using limited resources. Our NGO, The Dost Welfare Foundation, consist of #### inpatient long term rehabilitation facility. Due to the shift in traditional heroine smoking to intravenous use, additional challenges are addressed to including chronic hepatitis and HIV/AIDS. Besides describing our methods and techniques, we also provide demographics and outcomes of about 5000 patients who have undergone addiction treatment at our facility.

No. 6
WITHDRAWN

No. 7
Vivitrol as an Effective Management Option for Post-Bariatric Surgery Addiction Transfer: A Case Series and Literature Review
Poster Presenter: Tymaz Adel, M.D.
Co-Authors: Ammar Y. Ahmad, M.D., Mehwish Hina, Zohaib Majid, Asghar Hossain, M.D.

SUMMARY:
The obesity epidemic is on the rise with major short-term and long-term implications and global health impact. U.S. survey data demonstrate that 68% of Americans are overweight and 33.8% are obese, with bariatric surgeries in 2015 totaling 196,000. Concurrently, substance addiction, particularly alcoholism, poses significant burden to an already overwhelmed state of national debt via increased health-care costs and an overall negative impact on global health. Data demonstrate that alcohol-related disorders cost the United States almost $225 billion a year and, according to the Global Burden of Disease study, alcohol use is the fifth leading cause of disease worldwide. Bariatric or weight loss surgery (WLS) has been known to alter alcohol metabolism resulting in a higher prevalence of alcohol use problems post-operatively, thereby addressing one major epidemiological problem but potentially precipitating an even more burdensome one. A retrospective study by Ertlet et al concluded that a small percentage of patients (less than 3% of their sample) spontaneously developed alcohol dependence approximately 7 years after surgery. Another retrospective study found that 28.4% of participants reported having a problem with alcohol after WLS compared with 4.5% prior to WLS. Central to obesity and addiction is the concept of "addiction transfer," which helps us understand the rationale behind these data. Insulin, dopamine, opioid receptors, the mesolimbic reward pathways and the hypothalamus interplay in the regulation of feeding and addiction behaviors. FDA-approved treatments, i.e. Contrave (naltrexone HCl and bupropion HCl) or Vivitrol (naltrexone), already exist for chronic weight management and alcohol dependence, respectively, spurring the emergence of treatment options that are gaining increasing validity via the inter-relatedness of these two epidemics. In this case series, we will report two outpatient individuals, who developed alcoholism post-gastric bypass surgery and have successfully maintained remission of both food and substance addictions with once monthly Vivitrol injections. We aim to illustrate the importance of this connection between food and substance addiction, particularly with regard to the concept of "addiction transfer," in order to effectively treat this current, and very relevant, subset of individuals. We will also conduct a literature review of data over the last 10 years regarding the efficacy of treatment options for addiction in post-gastrectomy patients and highlight the neurohormonal mechanisms involved in food and substance addiction.

No. 8
Does Parenthood Influence the Rates of Quitting Smoking?
Poster Presenter: Verena Santos
Co-Author: Andre Malbergier

SUMMARY:
Background. Some studies have assessed the influence of pregnancy in women's smoking. In these cases, tobacco cessation is very common (Tong, 2013), even without aid or treatment (Solomon,

2004). However, maintaining abstinence after this period seems to be difficult (Coleman-Cower, 2014). The aim of this study was to evaluate if having children (from 3 to 10 years old) influences smoking cessation rates. Methods. This research was carried out in a specialized and academic service for drug dependence treatment in Brazil. One hundred and twenty four patients were assigned to receive varenicline titrated to 1 mg twice per day and 6 sessions of group psychotherapy. Sixty two (62) patients had children from 3 to 10 years old and 62 patients did not have children. Smoking status, cigarette craving, use of medication, side effects, and psychiatric symptoms were assessed during treatment. Carbon Monoxide was measured in every evaluation to compare with smoking self-report. The ?2 test and Fisher's exact test were used to compare categorical data and parenting. The Mann–Whitney test was used to analyze the association between parenting status, number of quit attempts, smoking initiation and number of cigarettes smoked per day. Survival analysis, using the Kaplan–Meier method and the Wilcoxon test, was used to examine the association between parenting, relapse and treatment dropout. Results. The number of parents who quit smoking by the end of treatment (12 weeks) was similar to non-parents, 35 (56.5%) and 36 (58%), respectively (p=0.85). After 6 months and 12 months of treatment the numbers of patients who remained abstinent were also similar between the groups. At 6 months 30 (48.4%) non-parents and 23 (37.1%) parents were smoke-free (p=0.241). At 12 months, the rates were 22 (35.5%) for non-parents and 19 (30.6%) for parents (p=0.568). The number of participants who quit treatment and the decrease in the number of cigarettes smoked per day were also similar between groups. Conclusion. Although pregnant women and mother of toddlers tend to present higher rates of quitting smoking, our study did not find any differences in treatment outcomes between parents of children from 3 to 10 years and non-parents. This data should stimulate health care policy makers to develop motivational strategies to reach this group of parents as second hand smoke is an important issue for young children (from 3 to 10 years old). This study was supported by Pfizer, Inc.

No. 9
Case Series With a Feasibility Study of an Online Opiate Dependence Service

Poster Presenter: Wiktor Lucjan Kulik, M.B.B.S.
Co-Author: Cyrus A. Abbasian, M.D.

SUMMARY:

Co-authors: Wiktor Kulik, M.D., Cyrus Abbasian, M.D. ndence service Abstract: Background: The profile of patients addicted to opioids in the Western world is changing, with increasing number of people becoming dependent on prescription analgesics. Many face significant barriers to treatment. In the UK, the National Health Service (NHS) drug and alcohol services are tailored towards the complex, severe and chronic end of the addiction spectrum. Significant stigma prevents attendance at drugs treatment facilities for those who do not fit this profile. We have developed a confidential internet based psychiatric service to provide greater access for this patient group. Method: At UK's only online psychiatry practice we provide a range of psychiatric services and to date have assessed and treated over 750 self referred patients. We have an Adult ADHD service which involves prescribing controlled drugs after an online diagnosis. We are now looking to develop an online supervised opiate substitution service with buprenorphine orodispersible film, based on a similar model. We will present case series of patients seen in our service, compared to UK benchmarks, and the model we have developed to safely diagnose, treat and supervise patients with opioid addiction online. Results: So far 10 patients with addictions have been assessed by Psychiatry UK; 9 males, the average age being 30, 7 White British, 2 having had a previous history of opioid dependence, 5 dual diagnosis, 2 behavioural addictions, with 2 completing treatment. We will present feasibility study of using buprenorphine orodispersible film for supervised maintenance treatment online. We shall compare these with national data for outcomes used as a benchmark. Also will cover limitations to online treatments and how these can be overcome. Conclusions: An evaluation of opiate addiction treatment online; in terms of safety, effectiveness, responsiveness and accessibility. This study is supported by Martindale Pharma and Psychiatry-UK LLP.

No. 10
Bidirectional Relationships of Psychopathology

With Internet Addiction in College Students: A Prospective Study
Poster Presenter: Yen-Ju Lin
Co-Author: Cheng-Fang Yen

SUMMARY:
Background: The aims of this study were to evaluate the prediction of psychopathology on the occurrence and remission of Internet addiction, and to determine whether Internet addiction will influence the change of psychopathology among college students during the follow-up period of one year. Method: A total of 324 college students participated in this study. Their levels of Internet addiction and psychopathology were assessed by using the Chen Internet Addiction Scale and the Symptom Checklist-90-Revised (SCL-90-R), respectively at baseline and one year later. Results: The results indicated that more severe psychopathology on somatization, obsession-compulsion, interpersonal sensitivity, depression, paranoid, and additional appetite and sleep problems on the SCL-90-R might predict the incidence of Internet addiction during the follow-up period of one year. Moreover, psychoticism on the SCL-90-R in the Internet-addiction group increased more significantly than those in the non-addiction group. Conclusions: The results of the present study supported that psychopathology may predict the incidence of Internet addiction, whereas Internet addiction at baseline may increase the severity of psychoticism.

No. 11
Alcohol and Opiate Addicted Patients: Clinical Differences on a Chemical Rehabilitation Unit
Poster Presenter: Michael Ramses Habib, M.D.

SUMMARY:
The current study investigates the construct validity of the Inpatient Treatment Alliance Scale (I-TAS; Blais, 2004). The I-TAS is a brief patient-reported measure of treatment alliance between the patient and their entire treatment team. The current study included 105 rehab inpatients who completed the I-TAS at discharge and compared this to scores a therapist rated object relations scale and a psychiatrist rated readiness for inpatient psychotherapy scale. Results showed that the I-TAS was related to the other two measures in theoretically meaningful ways.

No. 12
Alcohol and Opiate Addicted Patients: Clinical Differences on a Chemical Rehabilitation Unit
Poster Presenter: Michael Ramses Habib, M.D.

SUMMARY:
The current study investigates the construct validity of the Inpatient Treatment Alliance Scale (I-TAS; Blais, 2004). The I-TAS is a brief patient-reported measure of treatment alliance between the patient and their entire treatment team. The current study included 105 rehab inpatients who completed the I-TAS at discharge and compared this to scores a therapist rated object relations scale and a psychiatrist rated readiness for inpatient psychotherapy scale. Results showed that the I-TAS was related to the other two measures in theoretically meaningful ways.

No. 13
Drunken Madness: A Unique Case Report About Alcoholic Hallucinosis
Poster Presenter: Musa Yilanli, M.D.

SUMMARY:
Alcoholic hallucinosis (AH) is a well-known disorder as a complication of chronic alcohol abuse. Vivid auditory hallucination usually experiences just after alcohol cessation. Those hallucinations may occur after a long time of heavy alcohol consumption. The course and presentation of the disease show differences. It may progress over the time by persistent delusions with clear sensorium that resembles schizophrenia. We have a 65-year-old male with a history of alcohol use disorder and a remote history of polysubstance abuse (cocaine, heroin, amphetamines, mushrooms, and many others) presented with mild memory problems, delusions, and vivid hallucinations. Patient states that he sees, speaks with and interacts with his mother who deceased 20 years ago. These symptoms began only 2-3 months ago after being discharged from alcohol rehabilitation center. His UDS was negative. Patient reports no previous psychiatric diagnoses. The patient had been drinking average 25-40 standard drinks more than 40 years

but he has abruptly stopped 2 months ago. The patient was alert and oriented to person, place and time. He was feeling anxious whenever he became hallucinated. He believes that his mother is alive and he has a phone conversation where he is holding his own cell by calling random numbers. He admits he has an active conversation with his mother while he is eating his dinner. Patient smells and feels her. He remembers that he went to his mother`s funeral 20 years ago but he says "I am seeing her as a real person. Not like a spirit". He confabulates to fill in gaps of memory about recent events. The patient was diagnosed as alcoholic hallucinosis and Korsakoss psychosis considered as rule out the diagnosis. Risperdal was started and responded well to treatment. In this poster, we will present a unique case about alcoholic hallucinosis with a treatment. We will discuss the diagnosis with differentials and treatment options of alcoholic hallucinosis.

No. 14

Mania and Rhabdomyolysis: Weight Loss Pills Come With a Cost

Poster Presenter: Musa Yilanli, M.D.
Co-Author: Anita Kumar Chang, D.O.

SUMMARY:

Obesity is a common problem for the American population, especially the patients who diagnosed with bipolar disorder [1]. And so the market for diet pills, like Hydroxycut, has only grown in recent years. Rhabdomyolysis related to Hydroxycut has been described in a few cases [2,3] and mania associated with the same has been described in one case [4]. The case presented here describes a unique situation of both rhabdomyolysis and mania probably associated with the use of the advertised therapeutic dose of Hydroxycut. A 21-year-old young man presented to the hospital with irritability, grandiosity, increased goal-directed activity, decreased need for sleep, which appeared different from his typical psychotic episodes. He was found to be in fact manic and suffering from mild rhabdomyolysis. Aside from having stopped his antipsychotic for the last month, the patient admitted to use of Hydroxycut 2-3 tablets daily. He was admitted to the medical floor and started on IV isotonic fluid. His antipsychotic was restarted after the evaluation in the ED and the Hydroxycut was stopped, bringing him back to baseline within 4-5 days. The case presented here provides an example of two major potential adverse effects (mania and rhabdomyolysis) of the Hydroxycut pills. Even though our patient had multiple risk factors for rhabdomyolysis including history of using aripiprazole, carbamazepine and seizure disorder, the patient had been using these medications without any side effects in the past and his family had never witnessed any seizure-like activity for a long time. He had never presented to hospital with a manic episode. He had stopped aripiprazole treatment 1 month prior to presentation. We may conclude that rhabdomyolysis associated with adding hydroxycut on top of carbamazepine. While many Americans look for quick fixes to the obesity epidemic, caution should be provided by the medical community as these weight loss supplements are not without potential harm.

No. 15

Priapism Associated With Multiple Psychotropic in a Child: A Case Report

Poster Presenter: Musa Yilanli, M.D.
Co-Author: Umair A. Daimee, M.D.

SUMMARY:

Priapism is a urological emergency which is potentially painful and prolonged erection in the absence of any stimulation. Drugs especially antipsychotics count one of the most common reasons in the psychiatry clinic. [1] In the literature, underlying mechanism of priapism associated with alpha-1 adrenergic receptors which located corpora cavernosa of the penis [2]. We present 14 yo caucasian male with the history of Disruptive mood dysregulation who presented to the hospital with prolonged erections which is secondary to clozapine. As per medical records, priapism episodes occurred even with Clozapine, Olanzapine alone and Trazadone with Haldol treatment. During the last hospitalization, Clozapine was tapered off and he was started on Iloperidone. Due to the partial response, clozapine gradually titrated to a lower dose than the initial dose. He was stable on this regimen without any episodes of priapism and discharged. After discharge, Clozapine was discontinued due to multiple episodes of priapism. Patient had experienced at least 2 episodes of

priapism which lasted more than 4-8 hours. The patient was taken to an emergency department where he was assessed by a urologist. After multiple procedures to alleviate pressure priapism subsided and he was discharged back to State hospital. Clozapine had restarted because of poor response to other medications. Discussion: Drug-induced priapism is not associated with either the dose or the duration of treatment. [3] The underlying mechanism is related to alpha1 affinities of antipsychotics. The newer atypicals including clozapine, quetiapine and olanzapine have higher affinity. [3] Eventually almost all antipsychotic medications have been reported to cause priapism rarely. [4] This case is so unique due to priapism which is secondary to Clozapine, Trazadone and Olanzapine treatment. The patient who is at risk for priapism, selection of psychotropics medication, especially with low a-adrenergic antagonism, may preferable

No. 16

Alcoholic Hallucinosis

Poster Presenter: Romil Sareen, M.D.

SUMMARY:

OBJECTIVE: Take a look at an unusual presentation of alcoholic hallucinosis and the problems faced by the treatment team in diagnosing, obtaining collateral and management BACKGROUND: Alcoholic hallucinosis is a complication of chronic alcohol withdrawal. It is most commonly characterized as visual hallucinations (although auditory and tactile hallucinations are possible), clear sensorium, and normal vital signs along with paranoia and fear. Manifestations may occur as early as 12-24 hours after the last drink and usually resolve within 24-48 hours. It is vital to distinguish Alcohol hallucinosis from DTs as the two phenomenon are often confused but the symptoms and clinical presentation may be a lot different. Our patient is a 29 year old Hispanic male who was brought in by ambulance after he sliced off his 2nd and 3rd fingers of the left hand, reported eating one of the fingers and tossing the other one somewhere in his house and then gnawing at his left forearm. The case will examine difficulties coming up with an accurate diagnosis as our patient was an unreliable historian and it was unclear if this was a suicidal attempt, new onset psychosis or secondary to acute alcohol intoxication vs withdrawal.

No. 17

Managing Mental Illness in an Intellectually Disabled Patient

Poster Presenter: Romil Sareen, M.D.

SUMMARY:

The repercussions of closing down residential facilities for Individuals with Intellectual Disability Abstract Intellectual disability (ID) is a term used to define a developmental disorder characterized by both intellectual and adaptive functional deficits(1).The term has replaced “mental retardation” in DSM-5 which presents a welcoming change from the negative perception of mental retardation in the general population and the medical community(2). Individuals with intellectual disability face challenges in major aspects of life including social, financial, academic and most importantly residential. These challenges become graver when these individuals have co-morbid mental illness because it becomes difficult to differentiate psychological from behavioral symptoms. It is imperative for clinicians be extremely careful before formulating a diagnosis for them and also to formulate interventions that cater to them behaviorally and intellectually. One of the most important aspects of care for these individuals is proper housing placement. In a landmark Supreme court decision in 1999 (Olmstead v. L.C.), it was ruled that states needed to eliminate unnecessary segregation of people with disabilities and ensure they receive services in the most integrated setting appropriate to their needs(4). Intellectually disabled individuals with mental illness must be properly evaluated by clinicians to assess the level of supervision required to ensure proper mental health care. The law allowed these individuals to be able to meet their greatest potential by ensuring proper psychiatric care and opportunities to socialize with patients that have psychiatric conditions with similar severity. The closing down of Willowbrook State Developmental Center in 1987 in New York after the discovery of the inhumane inpatient conditions of patients with intellectual disability sheds further light on the plight of such patients(5). Due to the lack of such facilities and resources, the institution at

the time was housing 6,200 patients despite its maximum capacity of 4,000 (5). In 2013,the Commission on Quality of Care and Advocacy for Persons with Disabilities conducted a review of the Bernard Fineson Developmental Center(6). The findings suggested that there had been ongoing abuse of residents since the year 2010 and active treatment goals and objectives were not revised or implemented(6).A suitable housing option for these individuals would be a medical home model with a coordinated residential setting focusing on the quality and safety of patients. Although the state department has made various efforts for proper placements of these individuals, there still remains a large patient population without proper disposition. Frequently, such patients end up at various CPEPs across the state and are stuck there until a long term housing option can be worked out preventing them from thriving and function as equal members of society. Our case looks at one such patient who was admitted to our service and had a diagnosis of Intellectual disability and Schizophrenia upon admission.

No. 18

Eight-Year-Old With Rumination Disorder: A Case Report and Literature Review

Poster Presenter: Akshay Lokhande, M.D., M.H.A.
Co-Authors: Swapna Deshpande, M.D., Ayesha Sattar, M.D., Humaira Abid, William Oliva

SUMMARY:

Rumination disorder occurs when patients effortlessly regurgitate food with subsequent spitting out or re-chewing and re-swallowing. Rumination was considered as a disorder affecting intellectually delayed infants or adults, with a prevalence rate ranging from 6 to 10 %. However it has become clear that cognitively unimpaired individuals can also have the disorder. There is very limited data available on the incidence and prevalence of rumination disorder. It is most often seen in the age group of 3 to 6 years of age, but the diagnosis is often delayed for months to years. Rumination disorder can present with halitosis, malnutrition, weight loss, growth failure, electrolyte abnormalities, dehydration, gastric disorders, upper respiratory tract disorders, dental problems, or aspiration pneumonia. The disorder is commonly confused with gastroparesis and gastroesophageal reflux disease. This case involves an 8-year-old boy who was referred to psychiatry for the evaluation and treatment of rumination disorder. Per parents, patient regurgitates food and then swallows it after every meal throughout his lifetime. He underwent extensive work up including esophagogastroduodenoscopy with biopsies, gastric empting study, and patch testing which were unremarkable. Multiple diets, medications and food restriction did not improve his symptoms. During evaluation, patient seemed to have co-morbid anxiety symptoms. Patient was started on Zoloft 25 mg titrated up to 50 mg in a week, and was referred for individual psychotherapy. Patient was scheduled for habit reversal therapy and diaphragmatic breathing. Upon follow up, patient showed partial improvement of his anxiety symptoms from his medications, which will help him to engage and participate in therapy. While the exact pathophysiology remains unclear, it is thought to occur due to a reversal of the esophagogastric pressure gradient. Diagnosis can be usually confirmed by high-resolution manometry or gastroduodenal manometry. Patients who present with rumination often have comorbid psychiatric conditions, with the most common being depression and anxiety. Acceptance of the diagnosis by family is essential for successful treatment because the mainstay of therapy.

No. 19

Legalization of Marijuana and Its Impact on Attitude Among Youth Toward Use

Poster Presenter: Allen D'Souza, M.D.
Co-Authors: Senthil Vel Rajan Rajaram Manoharan, M.D., Tolga Taneli, M.D.

SUMMARY:

Introduction: Cannabis is the most commonly used illicit substance among adolescents. Marijuana use in youth has been linked with increasing difficulties in academics, psychiatric impairment, risky sexual behavior, increased alcohol consumption and motor vehicle accidents. Although recreational sale and use of cannabis is illegal in most states in the United States, a number of states have legalized it for recreational use. The intent of this literature review is to analyze the impact legalization of cannabis has

on attitude of youth towards use. Discussion: Studies in 2013 on college students in Washington and Wisconsin indicated that legalization would not change the participants' attitude towards use. Some students felt that legalization would mean an endorsement of marijuana and they were likely to perceive it as safe to use. Results from Monitoring the Future study shows a 20 percent increase in daily adolescent use of cannabis from 2005 to 2015. Another analysis on youth in Washington and Colorado by Cerda et al. shows that there was a decrease in perceived harmlessness and increase in Marijuana use by eighth and tenth graders following its legalization in Washington in comparison to other states without legalization however there were no significant differences noted in Colorado. Literature suggests that based on rates of tobacco and alcohol (which are legalized for adults) use in adolescents, legalization of cannabis for adults is likely to have an impact on its use by the youth. The factors by which legalization could possibly lead to increased use in adolescents are: decreased perceived risk associated with use, ready availability, lower cost price, and decreased fear of the law. Evidence already suggests that decriminalization leads to increased use of cannabis by adolescents. Increased parental use could indirectly increase use in youth. After the decriminalization of marijuana in 2010 in California a study revealed that 12th graders in California in comparison to their peers in other states were: (a) more likely to have used marijuana in the last 30 days prior to the study; (b) less likely to perceive use of marijuana as a health risk; and (c) less likely to disapprove of its use. Although some studies suggest that liberalization of laws with regard to cannabis might increase use among adolescents, some of the drawbacks of these studies are that they rely on self-reported use by adolescents and do not take into consideration adolescent populations outside of school. Conclusion: Further research is needed to clearly establish if legalization of cannabis for adult recreational use will increase its use among adolescents. However certain ways to prevent use among youth would be: imposing restrictions on sale of Cannabis to people under age of twenty-one, media regulations on advertising cannabis, adolescent substance use prevention program initiatives and educating youth about its negative effect in schools and colleges could help.

No. 20

Complexities in the Neurodevelopmental Presentation and Psychiatric Management of a Child With Multiple Inherited Chromosomal Abnormalities

Poster Presenter: Amandeep Jutla, M.D.

SUMMARY:

Objectives: We describe the case of a youth with inherited abnormalities in 3 chromosomes. The neurodevelopmental phenotype of this combination of abnormalities has not, to our knowledge, previously been described. Our case illustrates challenges in caregiver psychoeducation and clinical treatment particular to youth with inherited neurodevelopmental syndromes. Methods: The patient was seen following a referral to an intensive day treatment program at a large children's hospital. All available prior records were reviewed. Results: "E" was a 12-year-old girl referred to a day program for aggression at home and school. Mother was her primary caregiver, as parents separated when she was 7. At admission, E had diagnoses of ADHD, ODD, and intellectual disability (FSIQ 57). Her mother understood her to have "genetic abnormalities." Records indicated deletions in 2p25.1 and 5p15.33, as well as a duplication at 3q29. Prior testing showed that E's father had the same abnormalities. Her mother endorsed having "learning disabilities." Mother was observed to have cognitive limitations, concrete thinking, and was easily distracted. On physical exam, E had dysmorphic facies, microcephaly, astigmatism, oculomotor apraxia, and short digits bilaterally. Behaviorally she was impulsive and irritable, reportedly since early childhood; these symptoms improved only partially with stimulant medication. Given pharmacotherapy limitations, the focus of treatment was on psychoeducation and behavioral parenting strategies. Both proved challenging given mother's apparent cognitive limitations. At discharge mother reported better understanding the role of her daughter's genetic abnormalities in her behavior; yet, she continued to state challenges with following treatment recommendations, due to case complexity and cognitive abilities. Conclusions: The diversity of behavioral phenotypes across genetic syndromes are a challenge in psychiatric diagnosis

and treatment. Although E met descriptive diagnostic criteria for ADHD, ODD and intellectual disability, awareness of underlying genetic abnormalities contributed to our understanding of her limited response to medication and informed our work with her mother. As our understanding of the relationship between genotype and phenotype improves, psychiatrists will be better able to serve E and youth like her.

No. 21

Fluoxetine-Induced Behavioral Activation and Suicidal Ideation in a Pediatric Patient With Autism Spectrum Disorder

Poster Presenter: Amber Mansoor, M.D.

SUMMARY:

Introduction:Selective serotonin reuptake inhibitors are among the most commonly prescribed psychopharmacologic drugs, widely used to treat depressive disorders, anxiety disorders, and obsessive–compulsive disorder among children, adolescents and adults. However, they are associated with several serious adverse effects and pediatric population especially the ones with autism spectrum disorder (ASD) are more susceptible to developing them. This poster describes a case of 9-year-old patient with ASD and attention deficit hyperactivity disorder (ADHD) who was recently started on fluoxetine for anxiety and suffered severe side effects of increased aggression, impulsive/disinhibited behavior and suicidal ideation(SI). Case Report: 9 year old boy with history of ASD and ADHD-combined type was admitted to inpatient psychiatry pediatric unit for worsening physical aggression, SI and new onset of bizarre behavior for 2 weeks. Patient was recently taken off of ziprasidone on outpatient basis secondary to new onset hypertension and was started on fluoxetine10mg PO daily to assist with anxiety. 10 days into treatment with fluoxetine , patient was observed to experience severe mood swings and became physically aggressive at home. Patient's mother was also concerned about recent onset of disinhibited and odd behavior which included smearing food on the floor and eating it, feeding stuffed toys to the pet dog, attempting to cook without supervision setting off fire alarms in the house. Patient was also found to be endorsing SI with low self-esteem, seen by younger brother attempting to strangulate himself with a rope,one day prior to presentation. Patient had no prior history of suicide attempts. He was admitted to acute psychiatric care and fluoxetine was held on admission. Patient was continued on outpatient Guanfacine 1mg PO daily which was eventually up titrated to 2mg to assist with poor impulse control. 3 days into hospital course, patient improved drastically with complete resolution of SI and aggression. He was discharged to partial hospitalization program to ensure stability where he continued to show progress. He was discharged to home with well-controlled mood symptoms and behavior on Guanfacine 2mg PO daily. Discussion and Conclusion: This case is especially unique as it shows fluoxetine can induce multiple adverse effects in ASD patients. This patient's onset of symptoms coincides with timeline of initiation of the medication. Increased serotonin levels caused by fluoxetine may have resulted in over stimulation of this patient causing increased aggression, disinhibition and impulsivity leading to odd behaviors and exacerbation of SI. Abrupt resolution of symptoms farther suggests fluoxetine as the possible etiology. Clinicians must take special precautions when treating patients with ASD as these patients are more sensitive to medications. Initiation of a new medication at a low dose with slow up titration can prevent unfavorable outcomes.

No. 22

Trauma and Childhood Psychosis: A Case Study and Literature Review

Poster Presenter: Ananya R. Sreepathi, M.D.
Co-Authors: Ali Raza, Asghar Hossain, M.D.

SUMMARY:

A wealth of research shows a significant association between childhood adversities and the development of psychosis. Sexual abuse in particular seems to be strongly associated with the development of childhood onset psychosis. In our case report, an eight year old girl who allegedly suffered from sexual abuse suffered from psychotic symptoms leading to hospital admissions. The case is an example of the significant body of literature that shows a correlation between trauma and psychosis. By exploring this association we hope to create greater awareness

amongst providers and the community to screen for psychotic symptoms in children exposed to traumas, especially sexual traumas.

No. 23
WITHDRAWN

No. 24
Mood Disorders of Childhood and Adolescence: How Can We Do Better?
Poster Presenter: Anshuman Srivastava
Co-Authors: Sean Reilly, Chiadikaobi Okeorji, Cheryl Ann Kennedy, M.D.

SUMMARY:
Background: Common risk factors for child & adolescent mood disorders include family psychiatric history, family dysfunction, exposure to early trauma, bullying, academic difficulties, and substance use. We investigated what risk factors were most prominent in our sample. Methods: We did a retrospective chart review of children & adolescents (6 to 18 years) diagnosed with a mood disorder (major depressive disorder, bipolar disorder, dysregulated mood disorder & unspecified mood disorder) who were evaluated at our University Hospital Psychiatric Emergency Service between November 2016 to July 2017. We collected demographics, health insurance access, family substance use, parental separation, trauma, bullying, school achievement, prior diagnoses, and family history of psychiatric conditions. Bivariate and multivariate analysis were done to examine associations between risk factor variables and a mood disorder diagnosis. Results: This analysis included 174 patients: 52% female; 44% African American, 33% Hispanic, & 4% white; Age: 47% 14-18 years, 30% 11-13 years, & 23% 6-10 years. Over 50% (93/174) had a mood disorder diagnosis. The mean age for mood disorder diagnosis was 13.56±2.85 years; mean age for non-mood disorder was 11.81±3.22; two tailed T-test analysis showed that there was a statistically significant difference at the level of p=0.05 between the mean age of those diagnosed with mood disorder and those with non-mood disorders. Bivariate association analysis showed that gender, age, family history of psychiatric illness, and exposure to trauma all are significantly associated with mood disorders. The risk ratios (RR) and p values of these are: Gender: RR=2.41, p=0.0045, Age – RR=4.08, p=.0019; Family History: RR=1.34, p=0.042, Trauma: RR=1.44, p=0.0219. Multivariate regression analysis confirmed their significance. The odds ratios (OR) & p-values for the variables were: Gender: OR=0.41, p=0.0091, Age: OR=2.55, p=0.0003, Family History: OR=6.85, p=0.0064, Trauma: OR=3.06, p=0.0136. The regression model with these variables had a constant with p-value of 0.0009. Conclusion: It has been well documented what risk factors play roles in childhood mood disorders, and this review confirms that these factors are strongly associated with mood disorder diagnoses in a community that struggles with a multitude of negative influences. This suggests that targeting mental health treatment, including trauma treatment, and substance use prevention and treatment in entire families, and not just in youngsters with a diagnosed disorder, may help moderate and assist families and providers with developing effective coping strategies and implementing therapeutic approaches.

No. 25
More Than Teenage Rebellion: Prodrome and Treatment of Anti-NMDA Receptor Encephalitis
Poster Presenter: Anushka Shenoy

SUMMARY:
This is the case of a 15 y/o Latina girl with no past psychiatric history who presented to the ED with violent, aggressive behaviors after several months of declining performance in school, erratic, unpredictable behavior, and non-epileptiform seizures. Her initial CSF was relatively benign (5 WBCs, 1 RBC, three oligoclonal bands) and MRI showed new lesion in the corpus collosum; as such, leading diagnoses were MERS vs conversion disorder until antibody studies sent to an outside lab revealed anti-NMDAr encephalitis. Prior to diagnosis, the patient's agitation became so severe that she required ICU admission, four point restraints, and developed rhabdomyolysis and an AKI. Her psychiatric symptoms were refractory to benzodiazepines, multiple second generation antipsychotics (olanzapine, quetiapine and ziprasidone), dexmedetomidine (though trial was limited by hypotension) before responding to scheduled valproate and several days of

immunosuppressive therapy. After two rounds of steroid treatment and IVIg, she was discharged on mycophenolate and monthly IV Ig infusions and seven months later has made a near complete recovery (ongoing symptoms include mild cognitive deficits and poor sleep), though she still takes daily valproate. While it is known that psychiatric symptoms of anti NMDA encephalitis are difficult to treat and that valproate acid has been used to treat affective symptoms (1, 2) well as in seizures (1), there are no published case reports of valproate successfully treating acute agitation and psychosis in this population. While it is theorized that antipsychotics (particularly first generation) can exacerbate symptoms by leading to EPS, it is also accepted that second generation antipsychotics are useful in managing psychiatric symptoms (1, 6); however, in this case her symptoms were not improved by administration of three different SGAs. This case exposes the potential use of valproate in treatment of acute psychosis in NMDAr encephalitis refractory to other psychiatric treatments. Second, this patient exhibited an approximately six month "prodromal" period of behavior and personality changes, gait changes, and non-epileptiform seizures prior to diagnosis with anti-NMDA encephalitis. While there are reports of pediatric patients (though typically <3 years old) presenting first with gait disturbances (4), there are few reports of "prodromal" symptoms prior to the acute presentation of this illness.

No. 26

Case Series: The Contagion Phenomenon: "13 Reasons Why" Inciting Suicidal Behaviors in Teenagers

Poster Presenter: Avaas Sharif, M.D.
Co-Authors: Gobindpreet S. Sohi, M.D., Sheema Imran, M.D., Avi Siwatch, Shabber Agha Abbas, Asghar Hossain, M.D.

SUMMARY:

Case Series: The Contagion phenomenon: "13 Reasons Why" Inciting Suicidal Behaviors in Teenagers. Co-Authors: Avaas Sharif M.D., Sheema Imran M.D., Gobind Sohi M.D., Avi Siwatch M.D., and Shabber Agha Abbas M.D. Abstract: Background: Suicide was the second leading cause of death in adolescents in America in 2016 behind only accidents. Each year over 1,000 teens die from suicide with four out of five of these cases having identifiable warning signs. This case series will explore 5 distinct cases within a one month span, within the same community hospital. The patient's all within the age range of 12-17 who either attempted suicide or had suicidal ideations with plan. "13 Reasons Why" the Netflix television series were self-reported as a major trigger by the families of each one of these individuals. Discussion: As we understand from the past, contagion is a phenomenon that is often correlated with suicide. We have seen suicide contagion within homes, schools, communities, and as social media figuratively makes the world a smaller place we are beginning to see suicide contagion over broader areas within this impressionable demographic. This case series will explore causality vs exponentiation of Suicidal ideation and attempts in teenagers as well as exploring similarities and differences surrounding these 5 cases.

No. 27

Theory of Mind Deficits in Adults With ADHD

Poster Presenter: Bernhard Kis, M.D.

SUMMARY:

Authors: Bernhard Kis, MD, Franziska Niklewski, MD, Georgios Ntoulias, MD, Nika Guberina, MD, Markus Krämer, MD, Isabel Dziobek, PhD, Jens Wiltfang, MD, Mona Abdel-Hamid, PhD. Objectives: Scientific results concerning social-cognitive deficits in adult patients with attention deficit hyperactivity Disorder (ADHD) are rare. Current research, however, detects an association between ADHD and deficits in social cogntion (Kis et al. 2017). Methods: Social-cognitive abilities were analyzed with the help of the Cambridge Behavior Scale (CBS) which assesses empathy. Theory of Mind was measured with the Movie for the Assessment of Social Cognition (MASC). In addition, executive functions were estimated with a series of well-established neuropsychological tests. We compared performance patterns of treatment-naïve adults with ADHD (n=30) with a healthy control group (n=30). Basic demographic measures were matched. Results: In comparison to the healthy control group, adult patients with ADHD scored significantly lower in empathic performance in the CBS (p= 0,03).

Regarding Theory of Mind abilities, we observed that in the group of adults with ADHD the response option reflecting a "missing Theory of Mind" was chosen significantly more often (p=0,04). However, results of control questions evaluating attentional skills also showed a poorer performance in adults with ADHD (p=0,015). Conclusion: ADHD is associated with deficits in Empathy and Theory of Mind. This findings complete our knowledge about deficits in Social Cognition in adults with ADHD. Further research should focus on replication in larger study samples.

No. 28

Suicide Contagion: Our Responsibility as Mental Health Clinicians

Poster Presenter: Bimla Rai, M.D.
Co-Authors: Ketan A. Hirapara, M.B.B.S., Tolga Taneli, M.D., Nicole A. Guanci, M.D.

SUMMARY:

BACKGROUND: A recent World Health Organization report [1] shows that suicide is the 17th leading cause of death globally and the second leading cause of death among 15 to 29-year-olds, signifying it as a public health problem. Suicide attempts are usually preceded by suicidal ideation (SI). As per literature, over 90% of youth who die by suicide have psychiatric disorders, [2] emphasizing the importance of vigilance in suicidality assessment. In modern society, use of media plays an important role not just in communicating or connecting with others, but also possibly increasing suicidal risk in certain vulnerable populations by copycat effect, e.g. by portrayal of suicide. [3,4] Here, we present two cases of reported suicidal ideation resulting from watching a Netflix TV series on suicide. CASES: Case 1: A 13 year old female with history of Major Depressive Disorder (MDD) was referred for emergency evaluation by her school for SI. The patient's mother was called after the patient wrote a statement that she wants to kill herself by cutting her wrist. This note was found by her classmate, who alerted the school counselor. The patient also had recorded an audio tape a few days earlier, reporting her four friends' names whom she would hold responsible for her decision to kill herself. The patient was diagnosed with MDD two years earlier and her depressive symptoms were in partial remission with psychotherapy alone. Case 2: A 15 year old female with history of MDD and Generalized Anxiety Disorder was referred from school for an emergency evaluation of SI. She repeatedly made statements that she plans to kill herself by cutting her wrist. The patient's psychiatric symptoms were in partial remission with Zoloft 100 mg daily and weekly psychotherapy. Despite in clinically stable state in respect to their illness, both patients developed SI abruptly. There were no proximal psychosocial stressors; however, both reported recently watching the Netflix TV mini-series 13 Reasons Why, which most likely had promoted suicidal thoughts and promoted the means.[5] DISCUSSION: No doubt media has many positive attributes, but some negative impact and suicide contagion - well documented since 1986 - can be very concerning in society as evident from our cases. Since it serves as an essential platform to communicate with mass audiences and is ubiquitous, behavior modification and awareness are the most likely useful strategies that need to be adopted. Risk reduction measures that can be implemented by parents, counselors, and providers include guidance on media use by youth, close monitoring and discussion about suicidal content as portrayed in media, identifying risky behaviors, and encouraging enrichment activities (such as the outdoors). Due to the interface between mental health and this emerging concern, psychiatrists play an important role in screening for suicidality, but further societal awareness is needed as media attitudes to suicide portrayal change.

No. 29

Prevalence of Posttraumatic Stress Disorder in Student Whose School Burned Down

Poster Presenter: Chawanun Charnsil, M.D.

SUMMARY:

Background: Posttraumatic stress disorder (PTSD is a mental disorder that can develop after a person is exposed to a traumatic event, such as sexual assault, warfare, traffic collisions, or other threats on a person's life. Symptoms may include disturbing thoughts, feelings, or dreams related to the events, mental or physical distress to trauma-related cues, attempts to avoid trauma-related cues, alterations in how a person thinks and feels, and increased

arousal. Furr, Corner, Edmunds, and Kendall (2010) conducted a systematic review and meta-analytic examination of 96 identified youth PTSD studies following natural and human-made disasters. These reviews indicated that children show symptoms most in the first year post-disaster, and the symptoms mostly decrease rapidly (Furr et al., 2010; Wang et al., 2013) by nine to 14 months post-disaster (Vogel & Venberg, 1993). In Thailand there is a constant increase in human made disasters. The school that we want to study is a primary school in the rural area. Some students live at school dorm that burned down.Seventeen students died in the disaster. We want to know how much this disaster affects the remain students. Aims: This research aims to examine prevalence of posttraumatic stress disorder and its related factors in student whose school burn down, one month and six months after the incidence. Methods: Student in grades 1-6 were invited by asking permission from their parents. Subjects whose parent gave consent were screen PTSD by using UCLA PTSD Reaction Index(DSM-5 Version) at 1 month and 6 months after school burn down. Before screening, UCLA PTSD Reaction Index (DSM-5 Version) was translated to Thai and back to English to confirmed accuracy.Children who were diagnosed with PTSD were interviewed by child and adolescent psychiatrist to confirm diagnosis. Percentage and logistic regression were use as statistic evaluation. Results: Fifty-six students were invited to participate in this research with their parent's approval. Five out of fifty-six students (8.9%) had PTSD at one month after incidence. Two of them had symptoms recovered after six months. Six out of fifty six students (10.7%) had PTSD at six months after the incident, three out of six developed symptoms after one month, with the female-male ratio at 2:3. Students who lived in dorms when it burned down had significantly more PTSD than those who didn't live there $p<0.01$, RR=5.16(4.04-6.6). The age and history of facing disastesr or traumatic experience were not difference between group. Conclusion: Post-traumatic stress disorder is a common disorder in children after a disaster. Although some can recover shortly after incidence there others who develop symptoms one month after the incident. Direct exposure to trauma is a risk factor that can lead to the development of PTSD.

No. 30

Gender Specific Manifestations of Conduct Disorder in the Female Adolescent Patient

Poster Presenter: Crystal D. Reyelts, M.D.

SUMMARY:

LM, a 15 year old Caucasian female with past psychiatric history of post traumatic stress disorder (PTSD) and disruptive mood dysregulation disorder (DMDD), presents to the child and adolescent inpatient psychiatric service for worsened urges of hurting and killing animals. The patient had endorsed killing hamsters and birds for the past three years. She had not told anyone about her killing of animals until her psychiatric hospitalization. Although she endorsed not wanting to hurt animals, the patient reported that killing animals allowed her to feel empowered and in control. The patient reported that her feelings of power were brief and this is why she continued to hurt other animals over multiple years. On admission, patient endorsed thoughts of hurting other people but she denied homicidal ideation, suicidal ideation or self harm thoughts. Of note, patient also had history of PTSD due to two past episodes of sexual assault and reported verbal abuse from mother. She also reported persistent irritable mood along with verbal outbursts towards her mother which meet diagnostic criteria for DMDD. Due to her presentation at admission of killing animals, a thorough psychiatric evaluation was necessary to determine if patient also meet diagnostic criteria for conduct disorder (CD). Although the prevalence of CD has been found to be up to ten times higher in males than in female, it is still a common disorder in adolescent females. In this poster, we discuss differences in the presentation of and risk factors for CD between males and females. We will also discuss neuroimaging evidence for a pathophysiological basis between male and female presentations of CD.

No. 31

Consultation-Liaison Psychiatry in a Pediatric Setting: An Argentinian Experience

Poster Presenter: Jaime Mario Kuvischansky, M.D.
Co-Authors: Leonardo Hess, Julia Javkin, Romina Martinangeli, Antonela Nasello, Corina Ponce, Ezequiel Rodenas, Carla Graziadei, Pablo Bassanese,

Javier Monaco, Manuel Francescutti, Maria Jimena Matacin

SUMMARY:
Introduction: The steady rise in psychiatric consultation noticed in our country in the last few years, frequently related to drug use disorders, suicidal behavior and its clinical consequences, made a major need of developing a consultation-liaison psychiatry service, specifically to work in a pediatric setting. It must be remarked that before doing a pediatric consultation the psychiatrist needs to understand the context, including the general medical condition and its prognosis. Objective: Illustrate our experience in liaison psychiatry with this particularly sensitive population. It also tends to describe the most frequent chief complaints and the psychiatric approach chosen. We used specific algorithms to give the most accurate and actualized treatment to this population. Methods: This is a descriptive study, based on a population composed by children under 18 years old admitted in "Sanatorio de Niños" (Childs Hospital), Rosario, Santa Fe; Argentina between January 2015, and July 2017. Data was collected from medical records and analyzed with GraphPad v5.0. Results: During this period 58 patients were treated, 38 were women and 20 were men. The age range was from 5 to 18 years old. Only 16 were on previous psychiatric or psychological treatment. The most common reasons for consultation were: drug intake in the absence of suicidal behavior and nonsuicidal self-injury. Only 7 patients received psychopharmacological treatment during this stage. Only 3 patients received indication of a psychiatric hospitalization, and 55 continued outpatient treatment. Conclusion: This study shows our experience in the consultation in a pediatric setting. The findings prove the importance of an early detection of any sign or symptom that suggests mental illness, to give specific and specialized treatment. It is also remarkable the importance of keeping safe and away of children any medication to prevent serious consequences.

No. 32

Social Functioning and Occupational Adjustment Level Aqmong Patients With Schizophrenia Spectrum Diagnosis

Poster Presenter: Jaime Mario Kuvischansky, M.D.
Co-Authors: Romina Martinangeli, Leonardo Hess, Julia Javkin, Carla Graziadei, Antonela Nasello, Maria Jimena Matacin, Manuel Francescutti, Javier Monaco, Ezequiel Rodenas, Pablo Bassanese

SUMMARY:
Introduction Schizophrenia is a chronic disease that has a progressively deteriorating course that affects multiples areas. The average prevalence of this disease is of 1% among the general population. The aim of this article is to describe the labour integration, the level of autonomy and the chances this population has to achieve social development. Furthermore this investigation tends to illustrate the impact that this situation has on the patient and his family. The purpose of this investigation is to provide information to allow specific medical approach. Methods This study includes 51 patients with schizophrenia diagnosis (Diagnostic and statistical manual of mental disorders, 5th edition; 2013), 22 were women and 29 were men. All the patients were receiving outcome treatment at a medical center in Rosario city. The data was collected from medical records from January 2014 to January 2016 and analyzed with Microsoft Excel.
Results/Conclusion Most of the patients were unemployed. Those who could ensure a work opportunity was at the expense of a family business venture. The level of autonomy was limited in most cases. These results reflect the environmental impact of schizophrenia, affecting social, family and economic sphere.

No. 33

Drug Intake Beyond Suicidal Behavior: A Study in Pediatric Patients

Poster Presenter: Jaime Mario Kuvischansky, M.D.
Co-Authors: Antonela Nasello, Leonardo Hess, Maria Jimena Matacin, Romina Martinangeli, Carla Graziadei, Ezequiel Rodenas, Julia Javkin, Javier Monaco, Julia Javkin, Manuel Francescutti

SUMMARY:
Introduction Suicidal behavior includes a wide spectrum: from the ideation, development of a plan and a method of acquiring the means to do so until the possible consummation of the act. The suicide attempt is defined as any act in which an individual cause himself injury, or damage (variable) regardless

of the mobile and the result is lethal or not, in order to die. Drug intake is the method most frequent used, however it is not always used as a suicidal behaviour. Methods This is a prospective and descriptive study; the populations included were patients with a drug intake no matter the aim of the consumption. The data were collected during 12 moths using two questionnaires, one during the admission and the other one during the following. The data collected were analyzed with GraphPad v5.0 software Results This report shows several differences among the social-demographic groups; illustrate the risk factors and the different medical approach. Increased risk for further attempts. They increase the chances of clinical complications. Increased risk for medical complications. There are not standarized methods for evaluate risk. Most frequent in adolescents. Nonsuicidal self-injury (NSSI) might promotes similar behaviours among their peers. Irrational use of medications is a risk factor. Conclusion These results reflect the importance of an accurate prescription of drugs. This study presents characteristics of self-injurious behaviours in the absence of suicide attempt. These behaviours are considered an aggravating factor for the patient's progress. This study provides useful results for further investigations.

No. 34

Schizo-Obsessive Disorder

Poster Presenter: Frederick Afari

SUMMARY:

1. Introduction Obsessive compulsive disorder (OCD) is considered to be closely related to anxiety disorder, per DSM-V; obsessions are defined as recurrent and persistent thoughts, urges, or images that are experienced as intrusive and unwanted, whereas compulsions are repetitive behaviors or mental acts that an individual feels driven to perform in response to an obsession or according to rules that must be applied rigidly. On the other hand, DSM-V explains schizophrenia as having abnormalities in one or more of the following five categories: delusions, hallucinations, disorganized thinking/speech, grossly disorganized or abnormal motor behavior and negative symptoms. Although, these two disorders have been individually recognized in DSM-V, no reference is made as to the relationship between OCD and schizophrenia.

No. 35

A Case of Delusional Parasitosis With Prodromal Alcohol Abuse

Poster Presenter: Gargi Patel, M.D.
Co-Author: Nancy Kerner

SUMMARY:

Background: Delusional Parasitosis (DP) is a rare psychiatric disorder, in which patients have fixed false belief that their bodies are infested with small pathogens. The initial psychiatric diagnosis is often based on the exclusion of organic causes. By the time patients are referred for psychiatric evaluation, they already have had significant function decline; in severe cases, patients are impaired globally and lack capacity for self-care. While treatment of DP has been the focus, psychiatric warning signs in the prodromal stage receive little attention. Here we present a case of DP comorbid with alcohol abuse. Case Presentation: the patient is a 61-year-old woman, single, childless, retired physician, lives alone in NYC with no formal psychiatric history, who presented to ED with c/o leg swelling and skin infection with flies and fly larva. She provided a huge photo collection of her stool and nasal mucous tissue and claimed that they were infested. She firmly believed that she suffered from a condition called myiasis, although laboratory workups from different medical providers showed no evidence of infestation. She received a psychiatric evaluation in the ED, which revealed that she had a history of episodic alcohol and cannabis abuse for many years and increased a significant amount of alcohol intake for the past 6 months. She explained that the renovations were started in the apartment above hers 6 months ago and many small flies came into her apartment and began to lay larvae in her body. This led to her abusing laxatives to cleanse her GI tract, causing her significant weight loss, moving out of her apartment into hotels, and treating the infested skin with topical medications. Although she acknowledged that myiasis was primarily only seen in a tropical environment, but felt that her case was "unique." She expressed significant stress and stated, "No one believes me, but I have been suffering!" Collateral from her family confirmed that

the patient had gradually lost her ability for self-care along with increasing alcohol intake. The patient was admitted to inpatient psychiatric care involuntary for 3 weeks. She was treated with risperidone 4mg daily. Upon her discharge, she was no longer delusional and did not have a desire to drink alcohol. During the 3 months of outpatient psychiatric treatment, risperidone was decreased to 2mg daily. She initially attended weekly therapy, but slowly returned to drinking alcohol for "anxiety". She eventually left treatment and was unreachable. Conclusion: DP is a serious psychiatric disorder with rapid function decline in previously high function middle-aged and older individuals. Identification of prodromal symptoms (e.g., substance abuse, anxiety, and mood disturbances) before DP is fully developed has an important clinical implication. Treatment of comorbid psychiatric conditions is equally critical as treatment of DP to prevent relapse and recurrence.

No. 36

Decrease of Relapses in Long-Term Medicated Schizophrenic Patients

Poster Presenter: Gema Medina Ojeda
Co-Authors: Claudia Noval Canga, Adrián Alonso Sánchez

SUMMARY:

INTRODUCTION Long acting medication has been a massive advance in schizophrenia and schizoaffective disease treatment helping those patients with bad previous adherence. Nonetheless, adverse effects such as prolactin serum levels increase or metabolic syndrome have been reported. OBJECTIVES Observe clinical and psychopathological long term evolution of patients treated with Long term injectables, including Paliperidone, Aripiprazole and Zuclopentixole. METHODS Each 6 months blood tests with metabolic parameters and weight measures have been done to the patients included in this study. Also psychopathological and live quality scales have been fulfilled half-yearly. All people included in this study were psychopathologically stable at the moment of recruitment. RESULTS None of the — patients included in this study missed any of the injections, showing a better pharmacological and therapeutical adherence compared to oral medication. Up to this date, none readmission nor severe relapse has been reported in any of the patients. This stability seems to be related to life quality improvement reported in the scales. Weigh gain has been the most evident adverse effect, with an average increase of — kilograms. Moreover, mild prolactin serum levels increase has been detected, especially in those treated with Long term Paliperidone, with low clinical impact. CONCLUSIONS Long term antipsychotic medication continues being one of the best tools to deal with bad adherent patients. As some mild adverse effects may appear, close clinical observation is needed in order to preserve patients' clinical health.

No. 37

Delusions of Self Accusation in a Sexual Abuse Victim

Poster Presenter: Hajra Ahmad

SUMMARY:

This case report is clear depiction of the devastating aftermath of sexual violation in an individual. We present a case history of an individual who presented with delusions of self accusation. He had fixed delusions of being a sex offender and a murderer and had called the authorities many times and turned himself in. Since no proof was found against him he was released on bail but was registered as a sex offender. His fixed delusions seemed to have stemmed from his extremely abusive childhood and adolescent memories. He felt the need to be punished and had extreme feelings of shame, guilt and inability to make social interactions. From this case we try and understand the extreme psychological trauma of the victims, their negative self-imagery and the dysfunctional coping methods that these individuals adopt in their adulthood. I chose this case because this case also brings our attention to male survivors of sexual abuse as this is not as widely discussed topic as female sexual abuse. It not only shows patient's distorted relationship with others but also with himself. As mental health professionals we should strive to find more effective ways to bring these individuals back to the normal life through a combination of medications and therapy.

No. 38

How to Safely Prescribe Antipsychotic Drugs During

a Pregnancy

Poster Presenter: Hema Mekala
Co-Authors: Simrat Sarai, Steven B. Lippmann, M.D.

SUMMARY:
The prevalent use of antipsychotic medication has increased rapidly. Among pregnant women, up to about one third are prescribed antipsychotic pharmaceuticals during gestation. These drugs commonly provide efficacy for people with psychoses, bipolar disorder, affective illness, or anxiety. Pregnant women with untreated psychiatric conditions are at greater risk for symptom relapse and that increases maternal and child morbidity rates. It raises the chances for bleeding, abnormal placental development, and/or eclampsia, as well as for substance abuse and for inadequate prenatal care. Treating women with emotional illnesses during a gestation requires extra care since antipsychotic medicines could induce teratogenicity in newborns. Nevertheless, when clearly indicated, haloperidol or second generation antipsychotic pharmaceuticals like quetiapine, risperidone, or olanzapine are commonly the preferred pharmacotherapy during a gestation. There is evidence that the fetal malformations are not significantly increased when pregnant women are prescribed antipsychotic medications, as compared to those not exposed. Of course, these drugs are not consistently safe nor effective during pregnancy; each case has its own individual risk-to-benefit ratio. Nevertheless, when appropriately indicated, prescribing antipsychotic medication during a gestation should facilitate better obstetric, neonatal, and psychiatric prognoses. It is important to advise pregnant women experiencing a significant mental illness regarding consistent medication and prenatal vitamin intake and about obstetrical and psychiatric follow-up. Guidance about diet and not smoking, using drugs, or taking non-indicated medicines is also advantageous.

No. 39

Worsening Depression After Treatment of "Pleasant" Psychotic Symptoms: A Case Report

Poster Presenter: Jaison Josekutty Nainaparampil, M.D.
Co-Author: Richard Calvin Holbert, M.D.

SUMMARY:
Introduction: Schizophrenia and its related disorders significantly decrease quality of life. Patients have impaired interpersonal relationships, diminished educational attainment, lessened occupational functioning, and worse medical health than those without the disorder. The disorder is characterized by delusions, hallucinations, disorganization, negative symptoms and cognitive symptoms. Auditory hallucinations are usually ego dystonic for patients. They can disrupt one's ability to stay focused on reality and can increase the risk of suicidal ideation. However, case reports by Siris et al. discuss two patients whose positive psychotic symptoms may have decreased their suicide risk. In this case report, we will discuss a patient with ego syntonic auditory hallucinations that led to severe disorganization putting them at risk of self-neglect and when resolved with treatment led to hopelessness and suicidal ideation. Case Presentation: The patient is a 50-year-old Caucasian male suffering from schizoaffective disorder, bipolar type. Co-morbidities include alcohol use disorder, severe and cocaine use disorder, severe. The patient presented with various delusions. He believed he was the reincarnation of Jesus, a "sun god," and a man who could speak telepathically to his nine wives. He felt that others were jealous because of his "powers." The patient expressed to staff that he "enjoyed" his auditory hallucinations. Because he was resistant to prior neuroleptics, the patient was started on clozapine during his psychiatric admission. While the medication was titrated, the patient's delusions and auditory hallucinations began to subside, and the patient was then seen to endorse depressive symptoms including suicidal ideation. He reported that he felt "lonely" when his voices left him. Discussion/Conclusion: This case raises several questions about the proper way to assess a patient's psychotic symptoms. There are already categories that organize auditory hallucinations into "command" or "conversing," but it is not as common to categorize these symptoms into "pleasant" or "non-pleasant." Doing so may yield further insight into a patient's suicide risk. Additionally, clozapine is an agent that has been shown to be protective against suicidal behavior. Although clozapine's side effects may have contributed to this patient's worsening mood, the

patient only suffered from mild constipation and sedation. The qualitative content observed in our patient may suggest exceptions to the finding that clozapine is associated with the alleviation of depressive/suicidal symptoms.

No. 40

Treatment Challenges With Psychosis-Induced Catatonia

Poster Presenter: Tarek Kanaa, M.D.
Co-Author: Tayyaba Ali

SUMMARY:

The patient is a 31 years old Hispanic male with unknown past psychiatric history presents to the hospital as an Emergency Detention (ED) for bizarre behavior. Per records that arrived with the patient, he was witnessed to be sitting on a bus bench for hours before attempting to get onto a bus. Patient current state in the hospital ER lobby made it difficult to assess the patient as he would not speak or interact. Records from the Crisis Center indicates that the patient has been minimally responsive and had not been eating or drinking for the past few days. A phone call to the patient's parents reveals that the patient moved from North Carolina to Houston for employment, but he has a history of being on medications and has had episodes in the past where he stops communicating. A concern for catatonia is strongly considered at this time. However, his catatonia presentation was not classic as he was able to move and follows orders with prompting. The patient was started on Zyprexa Zydis and Ativan. In this poster, we will discuss the difficulties and challenges in treating mutism catatonia in a patient with poor previous records of psychiatric illness.

No. 41

Efficacy of Adjunctive Loxapine in Clozapine-Resistant Schizophrenia

Poster Presenter: Umang Shah, M.D., M.P.H.
Co-Authors: Lauren Diefenderfer, Jianwei Jiao, M.D., Ph.D.

SUMMARY:

Clozapine has been widely accepted as the most effective treatment for schizophrenia, refractory to other antipsychotic drugs, which comprise of about 25% to 30% of patient population. However, a significant portion, 45 to 70%, of clozapine-treated patients show a partial or inadequate response to treatment. There is scarcity of established evidence to guide clozapine-resistant psychosis in patients with schizophrenia or schizoaffective disorder. Several augmentation strategies including addition of another antipsychotic, mood stabilizers, anxiolytics, antidepressants, and glutamatergic agents, have failed to demonstrate convincing efficacy. Some data suggested promising efficacy of adjunctive ECT, however its clinical application cannot be generalized. The treatment of this subgroup of patients remains a major challenge, with increased health care costs and poor quality of life for affected individuals. Current data suggests that with similar efficacy to the other antipsychotics, loxapine, a dibenzoxazepine tricyclic, acts like a second generation antipsychotic at lower doses, but has an adverse effect profile comparable to that of the first generation antipsychotics at higher doses for chronic treatment. A clinical trial observed improvements with adjunctive treatment with loxapine for patients with refractory psychosis, insufficiently responsive to clozapine alone with no effect of loxapine on plasma clozapine levels. This is a case discussion about a 24-year-old African-American woman, non-smoker, diagnosed with schizophrenia and benign ethnic neutropenia. Patient has a long standing history of auditory, visual and tactile hallucinations, poorly controlled with multiple antipsychotic regimens including an ECT course. Her medications included adequate trials of fluphenazine, fluphenazine decanoate, haloperidol, haloperidol decanoate, lurasidone, paliperidone, paliperidone palmitate, risperidone, ziprasidone, quetiapine, olanzapine, and aripiprazole in various combinations. Divalproex and lithium were used as augmentation agents; however, she continued to exhibit psychotic symptoms that hindered her capacity for self-care, performing ADLs and interacting socially, for several years. The patient was started on clozapine for resistant psychosis, which helped improve her hallucinations for brief period of time before she gradually decompensated again. A trial of loxapine as an adjuvant therapy was planned. Within a week of tolerating adequate dose, patient's symptoms have improved significantly. This was evident by Global Clinical Impression, BPRS

scores, group attendance, and self-care. She has been performing ADLs independently, including hygiene and grooming. As we continue to monitor her symptoms with a hope of continued stabilization, her current improvement in quality of life, provides a rationale to further explore the efficacy of combining clozapine with loxapine for treatment resistant psychosis.

No. 42

Management of Lithium Toxicity in a Patient With Multiple Medical Comorbidities

Poster Presenter: Salman N. Salaria, M.D., M.P.H.

SUMMARY:

Lithium toxicity can result in patients who are on lithium therapy and have predisposing factors (ex: dehydration). The importance of this case report is to highlight the necessity to narrow down a broad differential diagnosis in an individual that presents with lithium toxicity with multiple medical comorbidities. Effective and efficient management are crucial in the prevention of future toxicity. Methods of practice which increase the awareness and knowledge of lithium toxicity among health care professionals and patients will help prevent lithium toxicity in patients on lithium therapy. With this protocol in mind, lithium can effectively stabilize individuals with a mental illness that will require its therapeutic effects for the entirety of their lives.

No. 43

Managing and Discharging a Case of Treatment-Resistant Schizophrenia With a History of Arson

Poster Presenter: Salman N. Salaria, M.D., M.P.H.

SUMMARY:

This is a case report on Mr. X, a 47 year old African American male with a diagnosis of treatment resistant schizophrenia. Mr. X has had a previous history of several hospital admissions in the past, starting from the early 1990's due to his mental illness. Client's legal history includes a charge of arson in the third degree. Mr. X had been prescribed several different psychotropic medications which include olanzapine, risperidone and quetiapine with little improvement. His most recent medication protocol before his discharge included clozapine, haloperidol decanoate and lithium. The importance of this case report is to investigate the link between schizophrenia and arson and to also stress the hurdles that are faced by health care workers when finding adequate long term placement for these individuals; once they are stable enough to be discharged into the community.

No. 44

Schizophrenia in Transitional Age Youth: Challenges in Diagnosis and Access to Services

Poster Presenter: Vanessa Schmidt, M.D.
Co-Author: Meelie Bordoloi, M.D.

SUMMARY:

INTRODUCTION: Schizophrenia is a neurodevelopmental disorder manifesting usually in late adolescence or early adulthood causing significant dysfunction. Psychotic symptoms may be common in children but diagnosis of schizophrenia rare. Diagnosis may be difficult with co-morbid substance use. Being a rare disorder in childhood comes with its own challenges with access to appropriate services, availability of medications covered by insurance especially for patients who have a history of non-compliance. CASE STUDY: X is 17 year old AA male who presented to the inpatient unit with bizarre behaviors. He believed that he was a famous rapper and had a UDS positive for THC. He was on aripiprazole, citalopram and trazodone but stopped 1 week ago after release from the Department of Youth Services after successful completion of substance abuse treatment and had been in their care for 7 months. During his 1 week hospitalization he was restarted on home medications with resolution of his symptoms. On follow up in clinic he was non-compliant with his medications, started having strange behaviors like talking to self and trees, laughing inappropriately, knocking on neighbor's doors and was hospitalized. His UDS was again positive for THC. He was referred to substance use Rx and after reaching the facility patient eloped. Family contacted outpatient provider informing that patient was non-compliant with medications, substance use treatment and he could not be located. Months after the elopement, the patient was arrested for attempting to steal a car and was incarcerated. He stayed in jail for about 4 months and after his release was hospitalized. During his incarceration he was off medications and

was in solitary confinement. After being released, he didn't recognize his mom. Upon admission he was paranoid and believed soap, food was poisoned. He had minimal interaction and was responding to internal stimuli. He would be sexually inappropriate and requested discharge to his "wife." Given his noncompliance, team believed he would do better with a long acting injectable. He had done well on oral aripiprazole and team decided to try LAI but given his age insurance would not cover it. He was the started on a trial of oral Haldol and slowly transitioned to Haldol-D. After 5 weeks he started to doing better but was not back to baseline. A diagnosis of Schizophrenia was made based on history and evaluation. One month after discharge he was readmitted a few days prior to his next Haldol D injection. He was getting agitated and bit his mother and sibling. He was pacing and more anxious and disliked being alone. His dose of his Haldol D was increased and he was discharged because of some improvement in symptoms. DISCUSSION: First break schizophrenia may occur during adolescence. Providers working with transitional age youth with diagnosis of schizophrenia also continue to struggle with problems such as non-compliance, lack of wraparound services for patient and family.

No. 45

Relationship Between ANKK1-Taq1a Polymorphism, Overweight and Executive Dysfunction in First-Episode Psychotic Patients: A Controlled Study

Poster Presenter: Vanessa Sanchez-Gistau
Co-Author: Sara Arranz

SUMMARY:

BACKGROUD: overweight observed in schizophrenia and the subsequent risk for developing the metabolic syndrome is a major concern in the treatment of psychosis. It has been reported overweight rates to 48.3% in first episode patients (FEP) treated with antipsychotics for less than 6 months. Consequently, it has been suggested that tendency to become overweight is related not only to antipsychotic treatment itself but also to the interaction with other environmental and genetic factors present from the illness onset. Cognitive deficits are one of the core symptoms of schizophrenia and executive dysfunction has been also implicated in the pathogenesis of obesity.The A1 allele of the ANKK 1-taqIA polymorphism modulates the density of D2 receptors in the striatum and has been associated with both schizophrenia and obesity. It is controversial the nature of this association but there is some evidence of a relationship between the presence of A1 allele and poorer executive function performance in both schizophrenia and obesity. However, any previous study has investigated the interaction of overweight, executive dysfunction and taqIA polymorphism in incipient psychotic patients METHODS: We included 116 outpatients with an incipient psychotic disorder , 78 FEP with antipsychotic treatment of less than 3 months and 36 At risk mental state (ARM) attending the Early Intervention Service of University Hospital, Pere Mata Institute of Reus, Spain. Total DNA was obtained from the peripheral blood and the rs1800497 variant was genotyped. All subjects underwent executive function assessment by means of parts A and B of trail making test (TMT), the interference score of the Stroop test and the Wisconsin Card Sorting test (WCST). A set of ANCOVAS were performed to determine the effect of the interaction of overweight and allele status on executive function after controlling for confounders. RESULTS: Mean age of the sample was 24.4 (5.16) years and 67.7% were males. Nearly 30% showed a BMI higher than 20 and 67.5% were on antipsychotic treatment. No differences in chlorpromazine equivalent dose of antipsychotics were found between overweight and non-overweight patients. Two-way ANCOVA revealed a significant main effect of group status (F= 7.42; p= .008) and interaction effect group x allele status (F= 4.77; p =0.032) in the interference measure of Stroop. CONCLUSIONS: The overweight A1 carriers performed worse than A1-non carriers, whereas among non-overweight no differences were found in executive function performance. Although limitations, these findings suggest new evidence about the contribution of a gene involving dopamine control in weight gain via executive dysfunction in psychotic patients. Identifying psychotic subjects at higher risk to develop metabolic syndrome can help clinicians to promote preventive and intervention-based measures in the multidisciplinary treatment of psychosis.

No. 46

Mystery of Auto-Enucleation: What Is Behind the Eye?

Poster Presenter: You Na P. Kheir, M.D.

SUMMARY:

Mr. C is a 20-year-old African American male with a previous history of schizophrenia and history of multiple suicide attempts who presented to hospital for evaluation and management of self-inflicted enucleation of his right globe. He was initially seen at a local psychiatric emergency room and was placed on an involuntary commitment due to his psychosis and unwillingness to be hospitalized. While he was waiting, he complained of eye pain with concern for conjunctivitis. While waiting for medical clearance for transfer, the patient entered the bathroom without supervision and exited after he removed his right eye. He told the staff that he was simply scratching his eyes. He required immediate medical transfer to stabilize his condition and subsequent surgical intervention to clear the right orbit of the remaining nonviable tissue and repair laceration of his left eye. He was subsequently hospitalized psychiatrically and during hospitalization, Mr. C received a prosthetic replacement of right eye, as well as a prostatic cap to make the eye look more natural. He was stabilized on olanzapine, but he was mostly guarded with restricted affect, requiring a prolonged one-on-one monitoring while in the unit. He refused to discuss why he removed his eye or how he felt at that time, and he demonstrated limited insight about the episode. In this poster, we discuss the several hypotheses on causes and risk factors of auto-enucleation and cross-cultural implications of auto-enucleation in psychiatric disorder.

No. 47

Diabetes Care in Schizophrenia: What Results in Better Care?

Poster Presenter: Jonathan Hsu, M.D.
Co-Author: Paul Kurdyak

SUMMARY:

Introduction: Individuals with schizophrenia have high rates of diabetes and receive poor care. Diabetes guidelines, based on high quality evidence, suggest that optimal diabetes care includes periodic HbA1C, eye and cholesterol testing. Little is known about what determines the diabetes care quality within this population. Objective: Investigate the factors which impact diabetes care quality in patients with schizophrenia. Methods: A retrospective cohort study of Canadian administrative health records in individuals aged 18 or older with schizophrenia and diabetes on April 1, 2011 who reside in the Province of Ontario. Patients were divided into groups depending on how many of the three guideline-concordant diabetes care procedures they received in a two-year period. Optimal care was defined as having all three of the following in a two-year period: 4 HbA1C tests, 1 eye test and 1 cholesterol test. Demographic, clinical and service utilization characteristics were compared across three levels of diabetes care (0 vs. 1, 2, or 3 diabetes tests received) using multinomial logistic regression odds ratios. Results: Among 26,259 individuals in the Province of Ontario, Canada with diabetes and schizophrenia, 4019 (15.3%) had none, 7506 (28.6%) had one, 8378 (31.9%) had two and 6356 (24.2%) had all three diabetes care tests which consists of 4 HbA1C testing, 1 eye testing and 1 cholesterol test in a 2-year period from the index date. The overall number of primary care visits was not associated with diabetes care quality. However, primary care visits for non-mental health reasons only was strongly associated with better care [0 vs. 1 OR 2.68 (95%CI 2.38-3.01), 0 vs. 2 OR 4.50 (95%CI 4.00-5.10) and 0 vs. 3 OR 6.37 (95%CI 5.51-7.36), p-value = <.0001]. In addition, more outpatient psychiatrist visits were associated with better diabetes care and an increased number of psychiatric hospitalizations was associated with worse diabetes care. Conclusions: The results suggest that primary care physicians who focused on the medical issues of our schizophrenia population provided better care, whereas those focused on psychiatric issues were less likely to adhere to diabetes quality guidelines. The pattern may be suggestive of “diagnostic overshadowing”, where health care providers emphasize psychiatric illness issues to the detriment of chronic medical illness. It also appears that good diabetes quality of care is contingent upon good psychiatric care (psychiatric stability and frequent follow-up), which may lessen the burden of competing mental health issues.

No. 48

Ipratropium as a Rare Cause of Visual Hallucinations: A Case Report

Poster Presenter: Fatima Iqbal, M.D.
Co-Authors: Ali Raza, Zohaib Majid, Asghar Hossain, M.D.

SUMMARY:

Introduction: Hallucinations are intense and substantial sensory perceptions that occur without external stimuli. Hallucinations also differ from delusional perceptions, in which a correctly sensed and interpreted stimulus i.e., a real perception is given some additional/absurd significance. Hallucinations can occur in any sensory modalities i.e., visual, auditory, olfactory, gustatory etc. They are associated with mental illness but also can be related to organic disease and drug or toxic exposure. A visual hallucination is "the perception of an external visual stimulus where none exists". Here we report a case of a 60-year-old male who experienced visual hallucinations while on ipratropium inhaler. Case Description: Patient was a 60-year-old African American male with chronic alcohol use disorder and COPD, who was admitted for rehabilitation from alcohol. While inpatient he suddenly developed visual hallucinations after 15 days. At first it was thought that patient was delirious however all basic lab work such as Complete Blood Count, Complete Metabolic Profile, Ammonia levels and Urinalysis came out to be normal. He was vitally stable. Patient was on standing dose of Ipratropium bromide for his worsening COPD for couple of days that led to development of his visual hallucinations. The visual hallucinations later abated when he was changed to PRN dose of the medication confirming our finding that it was ipratropium induced and relatively rare. Discussion: Ipratropium bromide is a bronchodilator generally used to control and prevent symptoms of asthma and COPD. Ipratropium bromide is an anti-cholinergic agent that blocks the neurotransmitter acetylcholine in the central and the peripheral nervous system. When inhaled, ipratropium travels directly to airways, and very little is absorbed into the body. It has a half-life of 2 hours after inhalation or intravenous administration. Ipratropium bromide is considered well tolerable, with no severe adverse effects or drug interactions. The usual side effects are often disregarded as minor or as result of a patient's preexisting condition. However, the anticholinergic side effects can cause physical as well as mental impairment and are divided into two types: peripheral and central. The anticholinergic effect of ipratropium may be pertinent and relatable to the visual hallucinations. The pharmacoepidemiologic studies have demonstrated possible association between drugs and hallucinations. This relationship involves not only some already suspected drugs but also other drugs less known to induce such an adverse reaction. Conclusion: From the above case, we concluded that the anticholinergic activity of Ipratropium bromide can lead to visual hallucinations that is relatively rare but equally significant. The mechanism of action is not completely understood at this moment and future researches are required to establish this rare side effect of Ipratropium Bromide.

No. 49

Late-Onset Schizophrenia in Patient With Dandy Walker Syndrome: Case Report

Poster Presenter: Fatima Iqbal, M.D.
Co-Authors: Mehwish Hina, Asghar Hossain, M.D.

SUMMARY:

Background: Dandy-Walker Syndrome (DWS) is one of the congenital posterior fossa malformation associated with hypoplasia of cerebellar vermis and dilatation of fourth ventricle. Psychiatric symptoms range from psychosis to cognitive impairment in such cases. In many instances; ataxia, muscular weakness and nystagmus also contribute to clinical symptomatology of the cases. In DWS, mostly there is an early onset of schizophrenia manifesting in late adolescent age. Several cases have been reported where DWS presents as new onset of psychosis especially in adolescent patient. We report a case of psychosis in adults with DWS Objective: The objective of this case is to highlight the late onset of psychosis in DWS and to review the variability in symptomatology. This also enables us to study the long-term prognostic outcome of schizophrenia in co-existent congenital brain syndromes. Case Discussion: 42 y/o M with history of multiple psychiatric hospitalizations admitted to our psychiatric facility with worsening psychosis,

disorganized behavior and depressive symptoms. His first episode of psychosis as reported was at age of 35. During these 7 years he was managed with psychotropic medications while no neuroimaging done. During inpatient stay at our facility, his clinical picture of psychosis complicated with ataxia, which prompted MRI brain – revealing DWS. He responded well with antipsychotics and antidepressants; however, his subtle ataxia persisted and was recommended by the neurologist close observation with serial MRI's. Discussion: Schizophrenia is one the challenging psychiatric illness to manage and has been one of the leading psychiatric diseases claiming for disability in United States. Literature has shown the variability in response to antipsychotics in such congenital diseases, which attributes to pressure effect on brain and potential disruption in brain architecture. Symptomatology may range from subtle ataxia to florid psychosis and significant deficits in cognition. The prognosis of schizophrenia generally depends on the extent of the congenital maloformation and adequacy of social support available in such cases. Our care emphasizes the need to identify any congenital brain malformation in context of schizophrenia in early phase of illness and their prompt and aggressive management to affect the prognostic outcome. Conclusion: The primary emphasis of this case is to highlight the association of schizophrenia with Dandy-Walker Syndrome. Early detection of this inter-relation may affect the outcome of schizophrenia and will help physicians to adapt multidisciplinary approach for effective case management. Significant cognitive deficits, ataxia and muscular weakness may also constitute part of clinical picture and vigilant physical exam is recommended. This observation warrant further studies and follow up in terms of management.

No. 50

Major Depressive Disorder in a Chronically Ill Patient Unable to Speak: A Case Study on Supportive Psychotherapy

Poster Presenter: Brigitte DeLashmette
Co-Authors: Ramaswamy Viswanathan, M.D., D.Sc., Paulo Marcelo Gondim Sales, M.D.

SUMMARY:
Introduction: Chronically ill patients often develop comorbid conditions that are addressed by a multi-disciplinary team. About one third of them fit criteria for adjustment disorder or another depressive disorder (1). While significant attention is given by the team to the management of general medical problems, the existential needs of this population is not usually prioritized, especially when the patients are difficult to engage or have special communication needs. This case report aims to discuss how to teach medical students basic supportive psychotherapy techniques applicable to patients with special communication needs under severe stress and depressive symptoms. Results: A 54-year-old woman with no prior psychiatric history and a past medical history of hypertension, systemic lupus erythematosus with lupus nephritis, cerebrovascular accident, and NeuroMyelitis Optica (NMO) was admitted for shortness of breath in the context of a flare of NMO complicated by transverse myelitis and new-onset paraplegia. Her hospital course was further complicated by Klebsiella bacteremia, Clostridium difficile colitis, deep venous thrombosis, stage IV sacral decubitus ulcer, and acute respiratory failure that required chronic support with a ventilator through a tracheostomy. She was initially seen by Psychiatry for depressed mood and refusal to undergo frequent painful phlebotomies to monitor her arterial blood gases. After being diagnosed with adjustment disorder with depressed mood, she was started on sertraline 50mg daily due to the severity and chronicity of her depressive symptoms. After two months of her trial on Sertraline, she still endorsed depressive symptoms, but started to develop occasional suicidal ideation with the plan of removing the tracheostomy tube in reaction to acute pain or when feeling isolated. These symptoms ameliorated after she remained for a few days on constant observation, but over the subsequent weeks, she developed conditional suicidal ideations (e.g., if her brother would not be present). She benefited by provision of supportive psychotherapy by the medical students, supervised by a psychiatry resident and attending physician. Discussion: This case illustrates a unique opportunity for medical students to be called upon to help with this patient's need for consistent interaction and support. Supportive psychotherapy interventions are effective to address patients in acute suicidality (2), especially for those struggling

with depressive disorders (3). At the same time, these students gained experience with supportive psychotherapy that applies to other clinically relevant situations. In summary, this case humanized the learning experience of the basic supportive psychotherapy interventions to patients with special communication needs and allowed students to be curious and learn how to provide a biopsychosocial model of care.

No. 51

Addiction Medicine Education on a Scale From 1 to 5: Review of Teaching Methods and Assessment of Addiction Medicine in Undergraduate Medical School

Poster Presenter: Catherine Boylan
Co-Author: Rashi Aggarwal, M.D.

SUMMARY:
Background: With the ACA expanding substance abuse health care coverage to over 62 million Americans the need for addiction medicine services is growing. Though medical schools are integrating addiction medicine into their curriculum, it is not well known how medical students are receiving education on addiction and whether that education is effective. Objective: Explore teaching methods and learning assessment of addiction education in medical schools. Methods: A literature review was performed by searching PubMed using keywords "addiction" "education" "curriculum" and "medical students" for articles published in the last 10 years. References from articles were also reviewed. Results: Sixteen articles met the inclusion criteria of addiction medicine and undergraduate medical education. They include a mix of educational case studies, qualitative analyses, prospective studies, randomized controlled trials involving one to a few schools, and cross-sectional studies surveying 5 or more medical schools. The literature examined ways which addiction medicine is taught to students, students' reactions to the teaching methods and to addicted patients, when addiction medicine is being taught in the curriculum, and efficacy of the education. The most common modes of teaching cited were didactics, novel elective rotations, and internet-based learning modules. The elective rotations varied from 5 half-days in one week to 7 full weeks. Didactics and internet-based learning were built into the curriculum during the psychiatry rotation, family or internal medicine rotations, or longitudinally across courses and rotations throughout medical school. Efficacy of the addiction medicine curriculum was assessed in 11 articles. Five studies used a qualitative Likert type scale where students scored their own confidence in their training. Three studies analyzed themes in students' reflection essays for their reactions to the learning method as well as their feelings on treating patients with addiction. Only 3 studies used pre- and post-learning examinations and 2 studies used OSCEs to quantitatively evaluate students' acquisition of knowledge. Hours spent teaching addiction medicine were not consistently reported, and ranged from 1 hour to 6 months part time. One study reported aspects of addiction being taught in an average of 258 teaching sessions over the course of undergraduate medical education. Conclusion: As teaching addiction medicine becomes a growing concern, medical schools build the subject into their curriculum using both well-established and modern methods. Little research quantifies students' acquisition of knowledge on how to treat patients with addiction. Standardized assessment of efficacy of the addiction education in medical schools is needed.

No. 52

Undiagnosed Autism Spectrum Disorder in Adulthood

Poster Presenter: Chineze Worthington

SUMMARY:
Introduction Autism Spectrum conditions are just as prevalent as schizophrenia, 1% across all ages. Traditionally, a diagnosis of Autism had to be made in childhood, contemporary diagnosis no longer has that requirement. The broadening of the diagnostic criteria has made diagnosis in adulthood an important clinical issue. In the 1940s, Infantile Autism was well delineated in children and was thought of as a developmental disorder. The disorder was thought to have onset in childhood and was characterized by social aloofness and obsessive insistence on sameness or routine. Autism presentation in adulthood was not well studied until the 1980s, with the increasing awareness of the heterogeneity of the disorder. The heterogeneity as

well as the work of Asperger in Vienna lead to the concept of spectrum of disorder characterized by developmental difficulties. The diagnosis of Asperger syndrome in DSM IV became applicable to adolescents and adults not well characterized by Infantile Autism, which required delay in language or cognitive abilities. Autism studies have shown that as many as ? of affect Autistic individuals either make it to adulthood without being diagnosed. In addition, gender may play a role in the delay of diagnosis or even miss-diagnosis. We present a case of a 30 year old female with past psychiatric diagnosis of Bipolar d/o, OCD, ADHD and Anxiety disorder, who self-referred due anxiety triggered by disruption of routine at work. Case Patient is a 30 year, single, mixed Ecuadorian and Italian descent, domiciled in a shared apartment with a friend, recently employed as program manager at a non-profit organization that offers free classes, past medical history of mild obstructive sleep apnea, past psychiatric diagnosis of ADHD, Bipolar disorder and OCD, self-referred to outpatient psychiatry clinic with anxiety that's interfering with her job, no history of substance abuse, no family history of DSM diagnosis but notes maternal mother and aunt had fixed way of performing tasks, and reported father had anger managements issues with tendency towards violence. She endorsed chief complaint inability to focus at work. She describes her thoughts as "it feels like there are 15 TVs on different channels and a conveyer belt spinning around my head". In addition she reports getting anxious and agitated at work when her way of performing a task was interrupted or when asked to do it differently. She stated "being around people drains me" and often avoids social activities. Her brain CT scan showed mild bifrontal cortical and superior vermian atrophy. Lab work showed slight elevation in alkaline phosphatase, CBC shows borderline normal hemoglobin level with high variation in size. Her urine toxicology was negative. EEG done recently at outside facility was normal. Neuropsychological testing done at age 16, brought in by patient, showed poor executive function but 96 percentile in IQ. Two ASD screening tools re

No. 53

Training Psychiatry Residents in Long-Term Psychodynamic Psychotherapy

Poster Presenter: Dusan Kolar, M.D.

SUMMARY:

The goal of this review is to provide the structure and specificities of psychotherapy training in psychodynamic psychotherapy for psychiatry residents at Queen's University, Canada. Some common difficulties encountered in teaching psychodynamic psychotherapy to residents will be also outlined. The Royal College of Physicians and Surgeons of Canada requires a minimum of 32 weeks of the PGY2-PGY5 psychotherapy experience. Most of Canadian universities organize training in supportive psychotherapy, cognitive-behavioral therapy and long-term psychodynamic psychotherapy for psychiatry residents. The summer didactic sessions on case formulation and psychotherapy interviewing skills are required before beginning psychotherapy practice. A workshop on Psychodynamic Psychotherapy is included in psychotherapy curriculum and completion is mandatory for all residents. Second year residents provide individual supportive psychotherapy to patients with the minimum of 20 patient sessions in supportive psychotherapy. They participate in group supervision sessions from for 1.5 hours each week for eight months. Fundamentals and common factors in all psychotherapy modalities will be learned during these group sessions in the context of case supervision. This psychotherapy approach has many elements of supportive psychodynamic psychotherapy and this is the best preparation for a long-term psychodynamic psychotherapy. At the beginning of third year of the residency training residents are assigned their long case supervisor and they begin supervised practice in long-term psychodynamic psychotherapy. A minimum of one year of supervised treatment is required for all residents at Queen's University while some others Canadian universities, such as University of Toronto extended this requirement to two years of supervised practice in psychodynamic psychotherapy. Some residents may perceive psychodynamic psychotherapy as too complicated and they may require in supervision more guidance in psychotherapy technique and understanding psychotherapy process. This is understandable because they did not have personal/didactic analysis prior to starting practice in psychodynamic

psychotherapy. Unlike the psychoanalytic training organized by psychoanalytic institutes, training psychiatry residents in dynamic psychotherapy is less clearly conceptualized in terms of standards and expectations from both residents and supervisors. The profile of psychodynamic psychotherapy supervisors for residents may vary significantly with regards to their training, experience and personal style in supervision. Criteria for assessment of resident performance and their progress in training are not well established. Residency training committees and psychotherapy training committees should work on developing more sophisticated training standards of psychodynamic psychotherapy training for psychiatry residents.

No. 54

Reported Substance Use Among Young Medical Doctors Applying for Medical Residency Programs in Brazil

Poster Presenter: Eduardo de Castro Humes, M.D.

SUMMARY:

Reported substance use among young medical doctors applying for Medical Residency Programs in Brazil Authors: Eduardo Humes, M.D., Renerio Fraguas, M.D., Ph.D. Abstract: Background: We have previously reported the association between reported psychiatric diagnosis (rPD) and poorer performance during Medical Residency Selection in a Brazilian Sample. In Brazil, medical examination for residency programs involves a written examination to access clinical knowledge, and in general also includes a clinical skills evaluation, as well as an interview with curricular analysis. This examination should be the same to any given specialty at each residency training program. Now, in the sample of our previously reported study, we investigated the relationship between the reported use of substances and the performance in the residency selection process, considering the potential influence of a rPD. Methods: The University of São Paulo Medical School (FMUSP) Ethical Review Board approved this study (Registration number 419/2014). Candidates were invited to join the study as they finished the clinical skills examination. All participants signed an informed consent form. Performance on the residency selection was accessed by the final grade on selection process, which takes in account the written clinical knowledge examination, the clinical skills examination, and the interview. Substance use and psychiatric diagnosis were self-reported. Results: The authors invited all 643 candidates and 515 (80.09%) accepted to participate in the study. Sixty-eight participants (13.44%) reported a psychiatric diagnosis and 126 (24.47%) reported use of psychotropic medications on the 3 months prior to the evaluation. The psychotropics most frequently reported were antidepressants, by 67 candidates (13.01%); methylphenidate by 40 (7.77%); and benzodiazepines by 30 (5.83%) candidates. Other, frequently reported medication use, also used aiming at improving the performance on the examination, were beta-blockers (53; 10.29%) and complementary treatments, such as herbal medicines, homeopathy and vitamins (49; 9.51%). Candidates reporting compared to those not reporting use of psychotropics did show a worse performance (p=0.010). However, the significance of this association did not maintain after controlling for rPD. Similar findings were found among candidates reporting use of benzodiazepines (p=0.044). No association was found for antidepressants (p=0.150) and methylphenidate (p=0.541), as well as for beta-blockers (p=0.535) and complementary treatments (p=0.253). Methylphenidate use was not associated to improvement of performance among candidates reporting (p=0.849) or not reporting (p=0.595) psychiatric diagnosis. Conclusion: In our sample, reported use of psychotropics was not associated with differences in performance, including the use of methylphenidate. These findings were present both for those reporting or not psychiatric diagnosis.

No. 55

Family Therapy on the Child Psychiatry Inpatient Unit

Poster Presenter: Elyse Huey, M.D.
Co-Authors: Mariam Rahmani, M.D., Kohl Mitchell Mayberry, D.O.

SUMMARY:

Inpatient psychiatric units can be effective agents for family change. Arguably, the most integral part of treatment during the child's hospitalization is a program of formal family therapy. In numerous training programs, as in our child unit at the University of Florida Health Shands Psychiatric

Hospital Unit, family therapy is led by one case manager and Counseling Students. During certain times of the year, such as semester breaks for counseling students and/or vacation/leave time taken by the case manager, family meetings for some patients were unable to be provided. The goal of this project is to train and integrate our Child Psychiatry Fellows at the University of Florida to lead family meetings while on their inpatient rotation. Some barriers to this goal have been that the Fellow was assigned to the inpatient unit for half-days for some days and they were not provided a formal curriculum for Family Therapy to be utilized on the child inpatient unit. We have started implementing this project by increasing the Fellow's time on the inpatient unit from 0.6 FTE in 2014 to 0.8 FTE in July 2016. This gives them more time to be physically present on the unit and provide more extensive care to the patients in the hospital. We are measuring the Fellow's level of confidence and fund of knowledge in leading family therapy meetings by conducting a pre-survey before they start their inpatient rotation. Fellows will receive didactic seminars on family therapy (at least 4-5 per year) and receive other resources (books, articles) that will help Fellows provide effective family therapy. The family therapy cases led by the fellow will processed in supervision with the Child Attending. Finally, a post survey will be conducted to again measure the Fellow's level of confidence and fund of knowledge in leading family therapy sessions. This project is currently in progress and we expect that this will help in meeting the child psychiatry Fellows ACGME requirements of providing family psychotherapy and family-centered care, as well as improve patient care on our child psychiatric inpatient unit.

No. 56

Teach Hope for Treating People With Borderline Personality Disorder? A Curriculum on Borderline Personality Disorder for Psychiatry Interns

Poster Presenter: Erica Robinson

SUMMARY:

Title Teach Hope for treating people with Borderline Personality Disorder? : A Curriculum on Borderline Personality Disorder for Psychiatry Interns Co-authors Erica Robinson, M.D, Sarah K. Fineberg, M.D PhD. Background: Many providers feel overwhelmed and ill prepared in caring for patients with Borderline Personality Disorder (BPD). Provider attitudes toward people with BPD may affect the care they deliver. We hypothesized that a focused educational intervention about BPD would increase provider empathy, comfort, and positive attitudes towards patients with BPD. Method: We designed and implemented a unique curriculum for psychiatry interns to learn about BPD. The curriculum was designed to be accessible: it was delivered by a second-year resident (ER), it acknowledged intern uncertainty and frustrations, and it delivered simple useable content. We aimed to increase knowledge and decrease patient- and provider- stigma about the disorder. Interns attended two one-hour didactic sessions. Session one focused on identifying core diagnostic criteria, disclosing diagnosis, etiology, prognosis, and stigma. Session two focused on current treatments and introduced clinical strategies from the Good Psychiatric Management (GPM) manual. Participants: Sixteen first year residents in the Yale Department of Psychiatry took the sessions during their inpatient rotations. Outcome Measures: We administered5-minute pre- and post-tests on the Qualtrics survey platform with short answers and 6-point likert scales to assess knowledge and attitudes. Pre- and post-test scores were averaged and compared using t-tests. Results: Before training, interns associated equally neutral and negative connotations with BPD patients but no positive. There was a significant shift toward positive words after training (t-test $p = 0.019$). Before training, interns correctly listed 2.59±0.30 core diagnostic criteria. After training, this increased to 3.57±0.30 (t-test $p = 0.035$). Intern comfort diagnosing BPD also increased with training: pre-test mean 2.14 ±0.59 increased to post test mean 4.14 ±0.46 (t-test $p = 0.021$). Comfort treating patients with BPD also significantly increased from before (mean score 2.14 ±0.59 to after training (mean score 4 ± 0.48; t-test $p = 0.033$). Conclusions: We developed a novel intervention to increase knowledge and increase positive attitudes toward BPD among psychiatric interns. We implemented the training in a small pilot sample with promising initial results. Future plans include data collection in a larger sample of interns to assess response to intervention, repeated post-test data collection after 6 months to assess durability of the intervention, and distributing the

curriculum to other psychiatric programs. We are hopeful that interventions like this will not only serve as a method of disseminating knowledge to residents but in turn could also lead to lower levels of provider stress when working with BPD.

No. 57

Cost-Efficiency and Utility of Obtaining Routine Admission Laboratory Testing in Adult Psychiatric Inpatients

Poster Presenter: Thripura S. Thirtala, M.D.

SUMMARY:

Routine laboratory testing for all admitted psychiatric patients is predominantly based on concerns that a potential concurrent medical condition may be contributing to the acute psychiatric presentation. Thyroid disease, hypercalcemia, sub acute combined degeneration, and other conditions are well known to occasionally present similarly to primary mental disorders. Public health mandates can also determine the types of tests done routinely during psychiatric admissions. For instance, routine screening for syphilis in newly admitted psychiatric patients occurred in some regions due to the higher risk for this disorder seen in psychiatrically admitted patient populations. The not uncommon failure of preliminary, emergency department medical evaluation of psychiatric patients to adequately detect underlying and potentially life threatening medical conditions, substance intoxication and withdrawal syndromes, and delirium is the subject of myriad studies. Furthermore, among patients admitted to psychiatric units who subsequently are found to have exacerbated or co-morbid medical conditions, considerably fewer underwent thorough laboratory and radiological testing, suggesting that there is an important role for selected diagnostic studies in the evaluation of patients being psychiatrically admitted. A search of the literature suggested that there are relatively few studies analyzing the value of medical test screening in psychiatric admissions. The main objectives of this study are to: • Understand the prevalence of abnormal findings and cost efficiency of lab tests performed routinely during psychiatric admission. • Compare the prevalence of clinically significant lab abnormalities by diagnosis. • Clarify if these tests alter the treatment modalities of psychiatric inpatients. This retrospective chart review will analyze records from more than 100 randomly selected patients admitted to Memorial Medical Center adult inpatient psychiatric unit over an 24 month period to determine how important the routine laboratory screening is for treatment of psychiatric patients. The study will also analyze how the results of screening lab tests are utilized and if any abnormal tests alter our treatment modalities. Descriptive statistical analysis will be performed using excel software. Revisiting the question of utilization of routine screening is important in this age of cost effective health care. Targeted laboratory tests may produce cost savings while not adversely affecting patient care, however the value of routine screening for all patients must be scrutinized carefully. Given the possibility that spurious results may increase costs and create unnecessary anxiety provoking further evaluation.

No. 58

Diagnosing and Treating Bipolar Disorder in Geriatric Population: A Case Report

Poster Presenter: Thripura S. Thirtala, M.D.

SUMMARY:

Mr. SC, a 75 year old Caucasian male patient with past psychiatric history of Major depressive disorder was admitted to medical floor for confusion and altered mental status. Primary team consulted neurology as they suspected stroke. Psychiatry team was also consulted as his stroke work up was all negative and patient was having abnormal behavior, on assessment patient was hyper talkative, grandiose, not sleeping in the hospital, jumping from topic to topic, and had tangential thought process. He was taking Venlafaxine 75 mg and celexa 40 mg at home, psychiatry team thought he might have late onset bipolar disorder, stopped his antidepressant and started on Zyprexa 5 mg qhs and Depakote 500 mg BID, for which patient responded. He was closely monitored in the hospital and in outpatient clinic. Patient mood was stabilized on zyprex 5 mg qhs and Depakote 500 mg BID, later zyprexa was changed to abilify as patient was concerned about weight gain. He is now on maintenance dose of Depakote, and Abilify 10 mg qday. His primary care physician noticed changes in his mental status and behavior and coordinated his

care with psychiatry team. As diagnosing mania in elderly population is uncommon and elderly patients with bipolar disorder are increasing, in this poster we will discuss diagnosing and treating bipolar disorder in elderly population.

No. 59

Case Report: Clinical Challenges in the Diagnoses and Management of Delirious Mania in a U.S. Veteran With a Mental Health History of Bipolar Disorder

Poster Presenter: Muhammad Ali Zaidi, M.D.
Co-Author: Aquanette T. Brown, M.D.

SUMMARY:

A 46 year old Caucasian male veteran with a mental health history of Bipolar Disorder was admitted to the inpatient psychiatric unit following an episode of mania. He was re-started on his outpatient medication regimen for mood stabilization with Quetiapine, Lamotrigine, and Clonazepam. He improved initially, however, on hospital Day 3, the veteran was noted to have acute worsening of manic and psychotic symptoms including, decreased need for sleep, excess energy and responding to internal stimuli. Additionally, he developed symptoms which were atypical for mania, including unprovoked agitation, depersonalization, difficulty sustaining attention, and visual hallucinations. These mental status changes were associated with, excessive motor movement, walking with bizarre postures, squatting, laying taut on the ground, and standing still for several minutes in uncomfortable positions. At this time, Seroquel was switched with Olanzapine for management of mania and psychosis. On physical exam, his vital signs were notable for tachycardia and fever, his extremities were noted to have a normal range of motion; he also experienced loss of bowel continence. The treatment team initiated a medical work up for delirium which revealed no infectious, neurological, or metabolic cause. Of note, there was concern for benzodiazepine withdrawal; however, adequate management did not relieve the symptoms. The veteran was transferred to medicine and neurology was consulted to assist with medical workup. His neuroleptic and benzodiazepine medications were discontinued at that time, except for Lamotrigine. The veteran was then transferred back to psychiatry after medical stabilization, Lamotrigine was discontinued at that time. He was started on Haloperidol, Benztropine and restarted on Clonazepam. At this time, veteran experienced improvement on his mental status exam, with resolution of mania, psychosis, and delirium. However, after two days of treatment, he developed acute rigidity in his extremities. Intramuscular Benztropine and Lorazepam improved his rigidity. Haloperidol was discontinued because of side effects and the veteran was managed with Risperidone and Ativan. He continued to show improvement in his mental status examination and was discharged on a medication regimen of Risperidone, Clonazepam, and Benztropine. The veteran experienced signs and symptoms which were atypical in nature for Bipolar Mania, such as fever, movement disorder, and delirium. This presentation is consistent with a rare medical condition, Delirious Mania for which limited research is available. Delirious mania meets the criteria for mania and delirium without an underlying medical disorder. Delirious mania is a potentially life threatening but under-recognized neuropsychiatric syndrome. Early recognition and aggressive treatment can significantly reduce morbidity and mortality.

No. 60

Obsessive Compulsive Symptoms May Herald the Onset of Psychosis: A Case of Schizo-Obsessive Disorder

Poster Presenter: Muhammad Ali Zaidi, M.D.

SUMMARY:

On initial inpatient presentation to our community hospital patient was a 28 years old, college educated single male with a new onset Obsessive compulsive symptoms (OCS). Based on the neurobiology of the obsessive compulsive disorder he was started on an SSRI and an atypical antipsychotic. Since it was a judicial hospitalization the patient had a prolonged hospital stay. Patient was continued on this regime; with time he developed disorganized behavior such as licking the floor, continuous banging on doors so much so that it lead to bleeding hands, extremely poor boundary appreciation and hyper sexuality with a tendency to stick his fingers in anus and then licking them. Considering it as a symptom of mania his SSRI was discontinued and he was started on Invega Sustena every 4 weekly. The psychotic

symptoms improved initially for few months but relapsed after a lucid interval of 5 months. The OCS remained as a persistent feature. While initially the patient presented with symptoms in line of OCD. The later development of psychotic symptoms prompted us to consider the obsessive symptoms as a potential prodromal for schizophrenia like illness. Co-occurrence of obsessive compulsive symptoms and psychotic illness was first recognized over a century ago. There is a growing evidence that patients with co-morbid obsessive-compulsive disorder and schizophrenia may represent a special category of the schizophrenia population.

No. 61

Bipolar Disorder in the Setting of Arachnoid Cyst

Poster Presenter: Kamal Patel, M.D.

SUMMARY:

Introduction; Arachnoid cysts are benign space occupying lesions containing cerebrospinal fluid which are usually diagnosed incidentally on neuroimaging due to most cases being asymptomatic. However several case reports have shown coexistence of psychiatric illness and arachnoid cyst, however this clinical presentation varies depending on the size and location of the arachnoid cyst. We present a case of a 51 year old male with bipolar disorder and new onset psychosis. Case Presentation; Patient is 51 year old, single, Caucasian male with past medical history of coronary artery disease, traumatic brain injury, pseudo-seizure, and arachnoid cyst on right middle cranial fossa displacing right temporal lobe tip seen on outpatient setting after being referred by his primary care physician to evaluate for his "depression." Patient had reported having depression since his childhood year secondary to his abuse both physically and sexually from ages five to fifteen. However he also endorsed having mood instability during his teenage years. Patient had reported having several days of elated mood and then days where he felt depressed and down. He denied having periods of time where his mood was relatively stable. He reported having changes in his mood every three to four weeks. During his days when his mood is elated, he endorsed having racing thoughts, irritability, increase activity, energy, irritability, hypersexual with multiple partners, and sleeping 1-2 hours each day. During his initial visit patient was in hypomanic state and then in depressed phase during four week follow up appointment. He also endorsed having paranoia during his follow up visit which he had denied previously. Patient had endorsed increase in intensity of his symptoms over the past couple years and especially over the past six month prior to his initial psychiatric visit. In conclusion, although we cannot certainly conclude the arachnoid cyst as initial cause of patient bipolar symptoms, we do believe it may have contributed with worsening of symptoms.

No. 62

Who Done It? A Stevens-Johnson Syndrome Case Report

Poster Presenter: Lindsay K. Works, D.O.

SUMMARY:

Background: Stevens-Johnson Syndrome (SJS) is a rare, but serious, acute inflammatory skin disease involving necrosis and detachment of the epidermis which is associated with several medications (sulfas, NSAIDs, anticonvulsants) and infections (herpes, Mycoplasma pnuemoniae, EBV). Due to the reaction having many known causes, it can often be difficult to identify the offending agent. The reaction is termed SJS when less than 10% of the epidermis is involved and toxic epidermal necrolysis if it involves greater than 30%. In the practice of psychiatry, the reaction is a known side-effect of Lamictal (Lamotrigine) and there are strict titration guidelines recommended in attempt to decrease the risk of the reaction. Early detection and immediate discontinuation are key to mitigate the severity of reaction. There is typically a prodrome consisting of fever, fatigue, and sore throat 1 to 3 days before eruption of rash, which is often the first indication of reaction and should not be ignored. Psychiatrists are often tested on SJS and are expected to be able to identify the signs and symptoms, but early identification often falls to PCM or ED. Case: 38 year old Indian male with no significant past medical history and previous diagnosis of bipolar disorder presented with complaint of progressive difficulty breathing and painful rash with 5 days of cold/flu-like symptoms despite initiation of antibiotics. The patient had been started on Lamictal nearly five

weeks prior and had slowly been increasing his dose. Cold symptoms were reported and the patient was started on Augmentin by his PCM. The symptoms worsened so the provider switched to Azithromycin. His symptoms continued to progress and culminated in difficulty breathing and painful rash which included genital and oral mucosal. Prominent oral mucositis was noted as well as conjunctivitis and vesicular rash with scattered peticia on groin, chest, abdomen, and legs. After presenting to the emergency room, the patient required emergent intubation due to acute hypoxemic respiratory failure. The patient was stabilized and successfully extubated the next day, but required another two weeks of hospitalization due to severity of his mucosal lesions and requiring IV hydration. Discussion: The patient developed SJS after taking Lamictal, Augmentin, and Azithromycin. Lamictal and Azithromycin were initially both considered culprits. To confirm most likely offending agent, ALDEN algorithm was applied, with the likely triggering agent being identified as Lamictal. The patient had been on Lamictal for about 4.5 weeks. The provider had slowly increased the dose, but at slightly increased rate than recommended. SJS prodrome was missed despite the patient presenting to the ED or PCM three separate times. The severity of the patient's symptoms would have been decreased if Lamictal had been discontinued upon first complaint of rash, as recommended.

No. 63

Managing Longstanding Depression in Bipolar Disorder

Poster Presenter: Maria Plata, M.D.
Co-Authors: Phebe Mary Tucker, M.D., Charles Huston Dukes, M.D., Britta Ostermeyer, M.D.

SUMMARY:

Mr. K is a 53 yo Caucasian male with a psychiatric history of bipolar I disorder, alcohol use disorder, and borderline personality disorder with 48 psychiatric hospitalizations and 20 suicidal attempts. Persistent depression with suicidal ideation in the context of alcohol intoxication led to his 49th hospitalization. Mr. K has been treated with copious combinations of mood stabilizers, antidepressants, and antipsychotics, but he continues to present with ongoing depression. This led to the concern of unsuitable medication management in a patient with long-standing bipolar depression. In this poster, the medication management of chronic depression in bipolar disorder will be discussed with comorbid conditions. Mr. K presented to the ED with plan to slit his wrists in the setting of worsening depression, alcohol intoxication, and a discharge 12 days earlier. He reported initial improvement of depression and medication compliance, but once home he started drinking liquor daily. His medications included fluoxetine 40mg PO QAM, aripiprazole 15mg PO daily, and haloperidol decanoate 50mg IM q28 days. He was diagnosed with bipolar I disorder in 1991and initiated on lithium. His first admission and suicidal attempt was not until 2009 when he presented with depression and mania. Fast-forward 8 years and he's had multiple suicidal attempts with a theme of medication overdose and alcohol. In Dec 2015 he was started on fluoxetine 20mg PO QAM and aripiprazole 5mg PO daily. These medications were titrated to 40mg and 15mg respectively. Haloperidol decanoate 50mg IM q28 days was added in May 2017. On this admission haloperidol decanoate was increased to 75mg. Even so he keeps presenting with deteriorating depression, suicide, and alcohol intoxication. Research on antidepressants has revealed they may be effective in the acute treatment of bipolar I or II with depression, but as opposed to bipolar II, antidepressants in bipolar I are linked to adverse outcomes including an increased risk of mania, rapid cycling, and induction of a chronic irritable dysphoric state. Has fluoxetine induced rapid cycling in Mr. K? Reports suggest that rapid cycling of manic and depressive episodes can be induced by antidepressants and dwindle after their discontinuation. In rapid cycling, a person with bipolar disorder experiences 4 or more episodes of mania, hypomania or depression in 1 year. More commonly, frequent episodes of depression dictate the picture leading to a misdiagnosis of unipolar depression and an episode of hypomania can be mistaken for a period of remarkably good mood. Certainly, substance abuse and an impulsive personality play a role in Mr. K's presentation, but fluoxetine may be contributing to his recurring mood instability and dysphoria. Perhaps tapering the antidepressant with an effective dose of a mood stabilizer approved for bipolar depression is the

solution to this case, as is treatment of comorbid disorders.

No. 64

Menstrual Psychosis in an Adolescent Female: Evaluating and Understanding a Zebra Diagnosis

Poster Presenter: Maura Tappen, M.D.

SUMMARY:

CS is a 16 y/o woman with a history of psychosis who was mental hygiene arrested and admitted to inpatient psychiatry for recent onset of psychosis and erratic behaviors. This was her 3rd admission for psychosis over the past 2 years. Per family, for the past several months prior to admission CS experienced 1-2 week episodes of disorganization with pressured speech, insomnia, and inappropriate laughter. During these periods she failed to take care of basic activities of daily living. Throughout her admission she demonstrated varying levels of these symptoms. The team felt her presentation was most consistent with an underlying bipolar disorder with psychotic features and recommended treatment with a mood stabilizer as well as an antipsychotic medication to help with acute agitation and psychosis as it related to mania. The diagnosis was supported by bipolar disorder with psychotic features in an immediate family member who had responded positively to combination treatment of lithium and clozapine. The patient's family was reluctant to consider this assessment, noting a prominence of symptoms that coincided with the patient's menstrual cycle and urged consideration of menstrual psychosis as diagnosis. Additionally, they refused evidenced based treatments for bipolar disorder, advocating instead for consideration of intervention via hormone medication (clomiphene and thyroid hormone) and nutritional supplementation. The patient's parents' negative association with traditional medication further exacerbated the patient's paranoia and the patient refused all medication. The team pursued a collaborative approach; expert consultation was sought from neurology, gynecology, and UK based academic provider who specialized in menstrual psychosis. Birth control medication was started to minimize potential impact of menses on mood. The team took careful logs of mood and psychotic symptoms, sleep, and menstrual cycles without finding correlation between menses and psychiatric exacerbations. The team weighed the risks and benefits of filing legal action for continued hospitalization and medications over objection, with particular consideration of risks of perpetuating the family's mistrust of the mental health system. An ethics consultation was obtained to help evaluate the balance of beneficence and non-maleficence. Collaborative family work was expanded to include the family member that had responded positively to traditional psychiatric treatments for bipolar disorder. Ultimately, close attention to underlying sources of resistance and barriers to engagement increased cooperative treatment planning resulting in compliance with a mood stabilizer and discharge to home with home based psychiatric interventions and intensive outpatient follow up care. This case highlights an unusual presentation of bipolar disorder that also underscores the unique challenges faced when a family and treatment team have different expectations for diagnosis and management.

No. 65

Difficulties in Managing Attention-Deficit/Hyperactivity Disorder in Adults With Bipolar I Disorder

Poster Presenter: Mirim Yun

Co-Authors: Yong Chon Park, M.D., Yubin Cho, Seokmin Noh

SUMMARY:

Mr.S., a 20-year-old Korean male with a past psychiatric history of Attention deficit hyperactivity disorder, came to emergency department with recent onset of increased goal directed behavior, pressured speech and violent behavior. He was admitted to the inpatient medicine service 2 years ago. After discharge, he came back to high school. Although he has had medication, he still has had distractibility, irritability. Since he became college student, he had many problems associated with interpersonal relations, maintaining a part time job and organizing things. So he was stressed out and leave school. 2 month ago, he discontinued his medication and has had increased goal directed activity, such as enrollment in computer learning program and English academy. 2 weeks ago, he started to present a pressured talk, hyperactivity,

irritability, insomnia, violent behavior. At admission, medical team made a decision that treat bipolar I disorder first and then titrate ADHD medication carefully. In this poster, we discuss the challenges and importance of differentiating manic symptoms from ADHD symptoms during the treatment and careful titration stimulant for ADHD symptoms .

No. 66

Acute Nicotine Withdrawal Presenting as Manic Symptoms

Poster Presenter: Allison Narta
Co-Author: Caesa Nagpal, M.D.

SUMMARY:

Background: Acute mania is characterized by abnormally elevated mood, decreased need for sleep, inflated self-esteem, distractibility, increased goal directed activity and excessive involvement in pleasurable activities that have high potential for painful consequences. While these symptoms are mostly seen in Bipolar disorder, it can sometimes be seen with use of drugs or several medical conditions. Nicotine has been shown to work on many of the same neurotransmitters as those involved in the proposed pathophysiology behind mania, but it has not been directly linked. We report a case of a 27-year-old Hispanic male with a presentation consistent with symptoms of a manic episode that are suspected to be a result of acute nicotine withdrawal. Method (Case Report): Mr. T, a 27 year old Hispanic male with a past psychiatric history of Bipolar disorder was admitted to an acute psychiatric facility for bizarre behaviors and running around naked in public. Upon examination, the patient was acutely manic with pressured speech, tangential thought process, and poor processing. His mood was labile. He was restless and noted to be pacing and jumping around the unit. He was very intrusive with poor boundaries and was flirtatious with many members of the treatment team. He was started on Quetiapine 200 mg/day. He had a past history of similar episode 8 years ago when he was treated with psychotropic medications for a month and has been off of any medications since that time. Upon further questioning, patient reported being hospitalized about 5 days ago for dizziness, nausea, vomiting, poor appetite, and stomach pain. He had been working in tobacco fields for over 13 hours per day for about 4 months mostly irrigating the fields with chemicals and would frequently not wear protective covering. It is suspected these symptoms were due to acute nicotine intoxication secondary to occupational exposure. He was discharged after 2 days and developed increasingly bizarre behaviors the following day. Over the course of his stay in this hospitalization, Quetiapine was increased to 400 mg/day with the patient displaying resolution of manic symptoms. Discussion: There are many reports of tobacco products favorably assisting bipolar patients with mood regulation. On a grander scale, it is possible that acute nicotine withdrawal may have precipitated this patient's manic episode. It is necessary to be mindful of the possible effects of abrupt nicotine cessation on a patient's mental health and stability as this case demonstrates a clear picture of nicotine intoxication followed by withdrawal and subsequent manic episode. Conclusion: This case illustrated the importance of taking a detailed history and inquiring about tobacco use and nicotine exposure in manic patients.

No. 67

Late-Onset Bipolar Disorder in a Patient With Lacunar Thalamic Stroke

Poster Presenter: Ana Margarida Romao Franco
Co-Authors: Inês Fonseca, Nuno Ribeiro

SUMMARY:

Bipolar disorder (BD) is an affective disorder characterized by fluctuations in mood, energy and activity. Published information regarding BD following stroke is sparse although in recent years there has been an increase in case reports and systematic reviews concerning the subject. A few cases of late onset bipolar disease have been described as a consequence of lacunar ischemic lesions following cerebrovascular disease, with specific brain regions like the basal ganglia and the thalamus being frequently implicated. Recent studies have also implied that intrinsic brain functional connectivity may play a role in bipolar disorder pathophysiology. We present the case of a 55-year-old Caucasian woman with no previous history of psychiatric disease until 2011 when she complained to her Family Doctor about depressive mood, hypersomnia and anhedonia. She was prescribed Paroxetine 20mg with improvement.

These symptoms appeared one year after having a hemorrhagic stroke with a lacunar lesion in the thalamic area and posterior arm of the right internal capsule that resulted in left hemiparesis, with partial response to physical rehabilitation. Four years later she was evaluated at Psychiatric Emergency Service with hypomanic symptoms for which she was medicated accordingly, but she showed noncompliance and stopped all medication. After three years, she was once again evaluated at our Psychiatric Emergency Service with maniac symptoms and admitted to our Acute Psychiatric Unit. She presented with dysphoric mood, pressure of talk, increased energy, flight of ideas, grandiose and mystical delusions and lack of insight. This case suggests a significant role of stroke-associated lacunar thalamic lesions in late-onset bipolar disorders, underlining the importance of searching for brain injury in such patients. The findings of this case are coincident with the most recent evidence regarding brain function connectivity in mood disorders.

No. 68

Culture Clash: Hikikomori's Impact on Assessing Major Depressive Disorder in Japanese-American Adolescents and the Importance of Cultural Competency

Poster Presenter: Samuel Schiavone
Co-Authors: Megan Chochol, M.D., Sean Pustilnik, Ana Maria Jaramillo, M.D., Puja Sawhney

SUMMARY:
Objective: We present a case of major depressive disorder with suicidal ideation in a Japanese adolescent man complicated by cultural stigma toward mental health successfully treated through an innovative approach prioritizing the understanding of Hikikomori. Methods: A review of the literature was preformed using Ovid and PubMed. Results: We present a 16-year-old Japanese man admitted for osteomyelitis and no formal psychiatric history who requested to speak with a psychiatrist. On assessment it was apparent he was suffering from recurrent severe major depressive disorder (MDD) with longstanding thoughts of suicidality. He adamantly refused to involve his parents in his psychiatric care because he felt they would dismiss his concerns, attributing them to a teenage phase, specifically Hikikomori. However, after building rapport, he agreed to involve them. His treatment was complicated by readmission for self-harm after a Japanese internist endorsed his parents' belief that the patient's presentation was a phase of adolescence. An interdisciplinary meeting between US and Japanese providers clarified the importance of psychiatric treatment, and with family support, psychotherapy, and psychopharmacology he has shown significant improvement. Discussion: The DSM-5 recognizes cultural influences on emotional experiences. There are numerous syndromes unique to Japanese culture including Taijin Kyofusho, a fear of one's body or functions offending another1, Hitomishiri, shyness1, and Hikikomori. The concept of Hikikomori is relevant to our patient given its hallmark is social isolation/withdrawal. 2 In a cultural context, widespread use and subsequent normalization of the term help to destigmatize the behavior3 and provide parents a framework within which to understand their children's behavior.2 It is known that minorities are less likely to report psychiatric symptoms and seek help.4 In Japan, mental disorders, specifically mood disorders, are associated with a greater risk of suicide.5 It is important for clinicians to appreciate the extent that cultural beliefs impact willingness to seek help, recognition of serious symptoms, diagnosis, clinical course, and treatment. Our innovative approach built on a foundation of cultural sensitivity strengthened the therapeutic alliance and ultimately helped the patient recover from his severe depression.

No. 69

Identifying the Current Guidelines for Evaluating and Treating Psychosis in a Child With Narcolepsy: A Case Report and Literature Review

Poster Presenter: Marie F. Rodriguez, M.D.

SUMMARY:
The interaction between sleep disorders and psychosis has been moderately studied in adults, but it requires further investigation in the child and adolescent population. This literature review aims to identify the current standards of care for evaluating and treating psychosis and behavioral manifestations in children with narcolepsy, and to discuss treatment options available when variable

barriers to proper treatment are present. Methods: A retrospective chart review was completed, in addition to a PubMed search using the terms “narcolepsy,” “psychosis,” and “children.” Results: A 10 year old Haitian-American male presented to a psychiatric inpatient unit with psychosis, after initially being diagnosed with narcolepsy and started on psychostimulants. He soon began exhibiting psychotic features and was medically hospitalized, but when further diagnostic tests were recommended, his family refused. Hospitalization was on an involuntary basis, as parents also disagreed with psychiatric treatment. His symptoms tended to wax and wane, at times being minimally responsive, at times agitated and responding to internal stimuli. The child was treated with antipsychotics with mild improvement. There were challenges in treating both psychotic and narcolepsy symptoms, thinking about improving one while preventing the exacerbation of the other, all beset with the difficulties of obtaining consent from the family. A review of the literature demonstrated the current standard of care for treatment of narcolepsy in children and adolescents is Modafanil, psychostimulants, and Sodium Oxybate.

No. 70

The Role of Doctor-Patient Relationship on Medication Adherence in Non-Chronic Schizophrenia Patients

Poster Presenter: Jhingoo Chang
Co-Author: Chan-Hyung Kim

SUMMARY:

Background : Although the quality of doctor-patient relationship could influence in medication adherence, only small number of researches support it in schizophrenia. In this study, we investigated the relationship between medication adherence and the quality doctor-patient relationship in non-chronic schizophrenia patients. Methods: We performed a cross-sectional study in one university hospital outpatient clinic. Among 81 schizophrenia patients who agreed with research, we excluded patients who had been treated over 10yrs. 40 patients were remained for analysis. Adherence rate and the quality of doctor-patient relationship were assessed with Medication Adherence Rating Scale (MARS) and Scale To Assess the Therapeutic Relationship (STAR). STAR is a self-rated questionnaire which is consisted with 2 subscales; Non-supportive clinician input and positive collaboration. Demographic and clinical data were also collected. Pearson’s correlation analyses between MARS and STAR were performed. In order to identify the effect of doctor-patient relationship on adherence, a multiple linear regression model was applied with MARS scores as dependent variable. Insight, drug adverse effect were considered potential confounding factors. Results: MARS score was not associated with STAR total score but showed significant correlations with STAR-Non-supportive clinician input score($r=0.51$, $p<0.01$). With the results of regression, medication adherence was significantly predicted from non-supportive clinical input(? = 0.316, $P<0.05$) and medication adverse effects(? = -0.486, P<001). These variables explained 42% of the variance. Conclusions: Clinician’s supportive attitude to patients and effort to reduce the medication adverse effect could improve medication adherence in non-chronic schizophrenia patients.

No. 71

Chronic Urticaria Masquerading as a Selective Serotonin Reuptake Inhibitor Cross-Sensitivity

Poster Presenter: Karolina S. Mlynek, M.D.
Co-Author: Brandon Hamm

SUMMARY:

Dermatological adverse effects from exposure to serotonin re-uptake inhibitors (SSRIs) and gabapentin are uncommon, but adverse reactions have been reported. Chronic urticaria (CU) is a dermatological condition lasting over 6 weeks that is estimated to be experienced by 0.1-3% of persons, and has been found to be associated with neurotic personality traits, very high psychiatric co-morbidity, and impaired quality of life. We report a case of CU after initiation of fluoxetine, with eruptions also following initiation of sertraline and gabapentin. A young adult female of Southeast Asian descent presented with obsessive compulsive personality traits, mild trichotillomania, and a single depressive episode. Past medical history was significant only for mild eczema in the winter months. One month after initiating fluoxetine 10 mg by mouth daily, the patient-noticed early benefit in concentration and anxiety, but developed a pruritic, blotchy,

erythematous rash with 1-2 cm lesions on the arms and face. No angioedema or anaphylaxis was present. Patient denied any changes in dietary habits, hygiene products, and medications. Fluoxetine was discontinued, and rash resolved after two weeks with fexofenadine 180 mg by mouth daily. Two months later, she was initiated on sertraline 25 mg by mouth daily, but after 7 days, the patient awoke with redeveloped rash, though pruritic erythematous maculopapular lesions were much larger than the earlier rash and were restricted to the hands and arms. Zoloft was discontinued and rash again resolved over the course of two weeks on fexofenadine 180 mg by mouth daily. She was then started on gabapentin 100 mg twice daily, with perceived benefit in anxiety, but after 3 weeks, again awoke with pruritic, progressive to rash on the upper arms and hand swelling. The rash resolved with discontinuation and similar treatment to above. Initial consultation with Dermatology and Allergy and Immunology determined inconclusive etiology, with possibilities including atypical presentation of chronic urticaria, serum-sickness reaction, leukoclastic vasculitis. Later dermatological eruption occurred in the absence of medication changes, and biopsy at that time was histologically consistent with urticaria. Chronic urticaria is a dermatological phenomenon that may be experienced in the setting of trialing psychotropic medications for this populations' highly prevalent psychiatric comorbidities. In the setting of rashes following the initiation of dissimilar psychotropic medications, CU should be considered as an alternate etiology to medication allergy, which would entail a different treatment approach.

No. 72

A Case of Olfactory Reference Syndrome Treated With Pimozide and Fluvoxamine

Poster Presenter: Karthik Reddy Cherukupally, M.D., M.P.H.

Co-Authors: Inderpreet Singh Virk, M.D., Tolulope A. Olupona, M.D., Oluwole Jegede, M.D.

SUMMARY:

Introduction: Olfactory Reference Syndrome (ORS) was described over a century ago but very little is published in literature about the syndrome. ORS is described as a false belief that one emits an offensive body odor with prominent delusions of reference and a repetitive set of behaviors aimed at checking or reducing the perceived odor. ORS is often accompanied by shame, embarrassment, significant distress, avoidance behavior and social isolation. Unfortunately, the documented treatment for Olfactory Reference Syndrome is very limited. So far, various treatment modalities have been tried ranging from antidepressants, antipsychotics and cognitive behavioral therapy (CBT) but no consistent clinical improvements has been found and available data is limited on their efficacy. Case Report: We describe a case of a 75 year-old African American woman with a symptom onset of ORS two years ago. The patient was brought in to the emergency room by a family member because of a suicidal attempt. She had reportedly tried to stab herself with a knife. The patient described extreme feelings of guilt, shame, distress, social anxiety to the point of totally isolating herself in her room due to the belief that there is a foul smell emanating from her vagina. Her thought content was also accompanied by extreme delusions of reference. She appeared depressed and hopeless. The patient reported frequent showers and vaginal washes accompanied by multiple visits to gynecologists and other specialists seeking for help. She had also been treated with various medications including Haloperidol, Fluphenazine, Citalopram, Sertraline and Risperidone for an earlier diagnosis of possible late onset schizophrenia/schizoaffective, depressive type, all treatments to no avail. During this admission, however, the patient's diagnosis was revised to Olfactory Reference Syndrome and was successfully treated with Pimozide and Fluvoxamine and she continues to make sustained improvement on outpatient follow up with a complete resolution of her symptoms. Discussion: Currently, ORS has been included in the last Diagnostic and Statistical Manual of Mental Disorders (DSM-V) under the section of other specified obsessive-compulsive and related disorder and not as a major entity. The identification and diagnosis of ORS is complex and critical as there is an overlap between ORS and other disorders as was seen in our patient, she was initially misdiagnosed and treated for schizophrenia without any symptoms improvement.

No. 73

Antipsychotic-Induced Gastrointestinal Dysfunction: A Common Yet Often Overlooked Side Effect

Poster Presenter: Katy Lunny
Lead Author: Monica Cory Federoff, Ph.D.
Co-Author: Alexis A. Seegan, M.D.

SUMMARY:
Constipation is a well-known and often underreported side effect of treatment with antipsychotic medications (1). In fact, patients taking antipsychotic medications are commonly treated with prophylactic bowel regimens, despite the lack of randomized controlled trials demonstrating increased efficacy of one pharmacological intervention for constipation over another (2). Further, while multiple case reports consistently describe the elevated risk of gastrointestinal issues associated with clozapine use, reportedly causing constipation in up to 60% of patients, few studies describe significant associations between other specific antipsychotics and pronounced gastrointestinal dysfunction (3). Here we report a rare case of colonic pseudo-obstruction and paralytic ileus secondary to multiple antipsychotic treatment trials. The patient is a 23-year-old man with a history of schizoaffective disorder, bipolar type who was admitted to the acute inpatient psychiatric unit for suicidal ideation, delusions, and auditory hallucinations in the context of medication non-adherence and cannabis use. Treatment with haloperidol was initiated with minimal improvements in psychotic symptoms, after which haloperidol was cross-titrated with quetiapine, with the patient complaining of constipation after four days. He subsequently developed abdominal distention with watery, non-bloody diarrhea and had several episodes of non-bloody, non-bilious emesis. An abdominal series demonstrated a partial bowel obstruction and significant colonic distension. The patient was urgently transferred to the internal medicine service where supportive treatment resulted in resolution of the pseudo-obstruction and ileus. The patient returned to the psychiatry unit once medically stabilized and his medication regimen was changed to monotherapy with risperidone. Within two days of starting risperidone, the patient again developed abdominal distention with emesis and multiple episodes of non-bloody diarrhea. A CT abdomen was consistent with return of paralytic ileus and colonic pseudo-obstruction, requiring discontinuation of risperidone. The patient was then started on aripiprazole which was selected due to its lower risk of causing ileus after careful review of the current literature . While further studies are required to elucidate potential associations and risk profiles between several antipsychotics and gastrointestinal dysfunction, our findings suggest that prophylactic treatment and recognition of these side effects is important, especially given the potentially fatal consequences of complications. In this poster, we discuss the importance of recognizing the various manifestations of antipsychotic-induced gastrointestinal illness and managing gastrointestinal complications in the context of necessary ongoing antipsychotic treatment.

No. 74

Efficacy and Profiles of Use of Low Doses of Paliperidone

Poster Presenter: Laura Mata Iturralde
Co-Authors: Alba Sedano Capdevila, Raquel Alvarez, Sergio Sanchez Alonso, Santiago Ovejero Garcia

SUMMARY:
Introduction: Antipsychotic treatment significantly reduces the risk of relapse and the secondary tendency to establish a functional disability. Practice guidelines by the American Psychiatric Association recommend the use of the lowest possible effective dose for the maintenance treatment. The antipsychotic paliperidone is available as once-daily extended-release oral paliperidone (ORAL paliperidone),once-monthly LAI paliperidone palmitate (PP1M), and once-every-3-months LAI paliperidone palmitate (PP3M) Objectives: To determinate the patient profile of use and efficacy of low dose of paliperidona (oral paliperidone: 3mg,6mg,9mg,12mg, PP1M: 50mg,75mg, PP3M: 175mg, 263mg) in an outpatient sample. Methods: This is a descriptive analysis of 56 patients with diagnosis of Schizophrenia (Sch), Schizoaffective Disorder (SD), Delusional Disorder (DD) and Bipolar Disorder (BP) recruited for a period of two years in Fundación Jiménez Diaz Hospital, Madrid (Spain). These patients had treatment with low doses of the three presentations of paliperidone. Some variables

were collected: age, sex, type of paliperidone treatment, assistance to psychiatric emergencies and hospitalizations one year before and one year after the initiaton of paliperidone treatment at low doses, years of disease diagnosis, psychiatric comorbidity, pharmacological polytherapy and sexual dysfunction. Results: Our sample comprises 56 patients, 61% were women and 39% men. About diagnosis 9% were BP, 14% of DD, 13% of SD and 64% of Sch. The median age of schizophrenic group was 52 years. Psychiatric comorbidity in 3.5%, substance abuse in 7% and with more than 5 years of diagnosis in 71%. The most used pattern of paliperidone are oral form with N=22 (39.28%) in comparison with PP1M with N= 20 (35.71%) and PP3M with N=14 (25%). Only in the 13% of cases used pharmacological polytherapy. The 96.5% of patients had no sexual dysfunction. The number of hospitalizations during the year prior to the current treatment with paliperidone was N = 15 (0.26%) and after one year of treatment initiation was reduced to N = 3 (0.053%), this difference was significant (p<0,01). The year before the onset of paliperidone, the number of psychiatric emergencies were N = 10 (0.382), and after one year of paliperidone, it was reduced to N = 8 (0.142), although no significant differences were found. Conclusions: Efficacy of low doses of paliperidone was high, with a significant reduction in hospitalizations for 12 months after initiation of treatment. Although it is not a young sample and there is a predominance of patients with more than 5 years of evolution of the disease, the use of low doses of paliperidone (in any of its presentations) should be considered within the treatment strategy in young patients and in the first psychotic episodes, given the efficacy evidenced by the reduction of relapses as well as by the low presence of sexual dysfunction and the low presence of associated po

No. 75

Recurrence of Psychotic Symptoms When Switching From Long-Acting Risperidone to Long-Acting Paliperidone in a Patient With History of Schizophrenia

Poster Presenter: Lorena Cancino, M.D.
Co-Authors: Eric Michael Ewing, M.D., Raj V. Addepalli, M.D.

SUMMARY:

Risperidone and Paliperidone are atypical antipsychotics that are similar in terms of chemical structure, efficacy and side effect profile. To our knowledge, there have been few reports in the literature that indicate that switching from long acting Risperidone to long acting Paliperidone could cause a recurrence of psychotic symptoms. Patient is a 60 year old Hispanic woman with a past psychiatric history of schizophrenia, no history of substance or alcohol use, and no reported medical history. She had multiple inpatient psychiatric admissions over the previous ten years and a history of noncompliance with medications and outpatient follow up. On her last admission, she was discharged on oral Risperidone and, due to her history of non-compliance, long acting Risperidone at the dose of 25mg intramuscular, was started on her first appointment after discharge. She was compliant with biweekly administration of Long Acting Risperidone for approximately two years. Her primary psychiatrist, honored patient's preference to switch from long acting Risperidone 25mg intramuscular biweekly to monthly Paliperidone Palmitate 78mg intramuscular. She continued outpatient follow up and remained psychiatrically stable in the community for 6 months. However, 3 months after her first dose of Paliperidone Palmitate intramuscular, she was noted to have a brighter affect, and to be more talkative. One week after her last outpatient visit, she was brought in to the Psychiatric Emergency Service due to command type auditory hallucinations to hurt herself and her family. This case raised some concerns regarding the efficacy of switching from depot Risperidone to depot Paliperidone. It is not clear whether her decompensation emerged during the switch of depot antipsychotics, or if it was part of the normal course of the disease. A review of literature indicates differences in mechanism of action and side effect profile between Risperidone and Paliperidone. Switching between medications based on published manufacturer recommendations may require further study to identify the need for individualized switching strategies and dosing to prevent relapse of symptoms in this process.

No. 76

Rapid and Sustained Improvement in Treatment-

Refractory Depression Through Use of Acute Intravenous Ketamine and Concurrent Transdermal Selegiline

Poster Presenter: Louis A. Doan, D.O.

SUMMARY:

Introduction: Treatment resistant depression remains a difficult clinical challenge for providers and one emerging intervention is intravenous ketamine infusion. Though rapidly effective as an acute treatment, the duration of the ketamine response is brief, and few studies had explored its utility as maintenance treatment. Among oral antidepressants, those in the MAOI (monoamine oxidase inhibitor) class are regarded as some of the most potent but still sparingly used due to adverse effects and dietary limitations. The recently available transdermal MAOI selegiline had lessened these concerns but still not widely used. We examined how a combination of these two powerful treatment modalities, acute ketamine and long term MAOI, can help to achieve and sustain antidepressant effects among severely patients that face imminent or prolonged psychiatric hospitalizations. Methods: Patients with severe, treatment refractory depression who could not undergo ECT (electroconvulsive therapy) were offered ketamine infusion treatment and concurrently initiated on transdermal selegiline patch. Many had failed numerous antidepressants but had not attempted an MAOI trial. Ketamine infusions were performed up to three times within a two-week period. Results: Thus far, five patients have received this combination treatment. Within a few days of finishing the ketamine infusion series, all five patients experienced improvement in depressive symptoms, which was sustained beyond a few months with combination of transdermal selegiline patches. Only one patient relapsed with a depressive episode two years after initial ketamine infusion and stability on selegiline. Discussion: This case series highlights a potentially powerful antidepressant treatment regimen for severely depressed patients unable or unwilling to receive ECT. Ketamine infusions enable patients to improve their quality of life quickly and diminish the prospect of a lengthy hospitalization. In particular, intravenous ketamine was not used as a maintenance treatment but as an acute treatment to offer immediate response until the patient was able to respond to MAOI treatment, specifically transdermal selegiline. The authors have no financial interests that can be seen as a real or perceived conflict of interest. This study has been approved by The Queen's Medical Center of Honolulu, Hawaii Institutional Review Board.

No. 77

Treatment of Raynaud's Phenomenon With the Serotonin and Norepinephrine Reuptake Inhibitor Venlafaxine

Poster Presenter: Madiha Syed, M.D.

Co-Author: David M. Leavitt, M.D.

SUMMARY:

Ms. H., a 38-year-old Caucasian woman suffered from Raynaud's phenomenon since mid-twenties. She experienced vasoconstrictor response of both hands consistently upon exposure to cold environment. Her hands would turn pale and then blue in the cold, and upon return to warm environment, she would experience tingling sensation in her fingers. Raynaud's phenomenon is recurrent vasospasm of the fingers and toes that usually occurs due to cold exposure. Ms. H has been an active runner since adolescence and takes part in marathons regularly but because of her symptoms, she had to discontinue running outside in the winter. She became depressed at 37 years old due to multiple stressors, and was started on venlafaxine (Effexor) to target depression. Immediately after beginning venlafaxine 37.5mg daily, she experienced mild improvement in her Raynaud's symptoms in hands - she recalled her hands not being as cold and pale as they used to be, and progressively over the month, her symptoms completely resolved. She had no previous trials of other agents to target Raynaud's symptoms or depression. She has tolerated an increase to venlafaxine 75mg for depression and her Raynaud's symptoms have remained in remission, allowing her to resume running outdoors throughout the year. One mechanism of Raynaud's phenomenon is considered to be due to the vasoconstrictor property of serotonin. The SNRI venlafaxine blocks uptake of serotonin into platelets and thus decreases the amount of serotonin released during platelet aggregation, which in turn, decreases arterial vasospasm. However, since SNRIs also block

reuptake of norepinephrine, there is a risk of vasoconstriction due to increased noradrenergic activity. Resolution of Ms. H's Raynaud's symptoms may thus be due to the serotonergic effect of venlafaxine. In this poster, we discuss the benefits of venlafaxine in a depressed patient with comorbid Raynaud's phenomenon. A detailed search in the medical literature reveals no previous reported cases of SNRI treatment benefitting Raynaud's Phenomenon.

No. 78

Managing Erratic Levels of Lithium Following Vertical Sleeve Gastrectomy: A Case Report

Poster Presenter: Mahamaya Bhattacharyya, M.D.
Co-Authors: Sina Shah, M.D., Raj V. Addepalli, M.D.

SUMMARY:

Ms. Z is a 59-year-old woman with a past psychiatric history of Bipolar I disorder admitted to the inpatient service for manic symptoms in the context of non-compliance with medications. Prior to this admission the patient had been following up in the outpatient service of the same hospital for about 20 years and had been psychiatrically stable until recently. The patient is a heavy smoker on nicotine replacement, and blood alcohol levels and urine toxicology screens were consistently negative. Significant stressors included death of her husband and her father two years ago, as well as loss of employment due to an accident one year ago. Patient was started on Lithium carbonate 600 mg BID and Haldol 2 mg BID, and serial Lithium levels were monitored. Interestingly, lithium levels increased from less than 0.2 meq/l to 1.42 meq/l after nine days of administration of Lithium 300 mg in the morning and 600 mg at night time. The blood was drawn before Lithium administration and greater than 10 hours of last dose. The patient's glomerular filtration rate was consistently within normal limits and patient was not on any ACE-inhibitor. The patient did not show any signs or symptoms of Lithium toxicity. Upon further history taking, and corroboration as per records obtained from the operating hospital, it was learnt that the patient had undergone sleeve gastrectomy for weight reduction five years ago. Subsequently Lithium carbonate dose was decreased to 300mg BID and lithium was changed into an extended release formulation and after nine days the level decreased to 0.72. The suspected mechanism which caused lithium toxicity included possibility of increased stomach pH following sleeve gastrectomy which may facilitate the deprotonation of carbonate salt and result in an increased dissolution of lithium ions. Other factors which are poorly understood in patients who have undergone bariatric surgery include the type of formulation used tablet or liquid or extended release formulation, reduction in surface area, changes in transit time and reduction in food ingestion. Other factors which may influence serum lithium levels include gastrointestinal complications such as diarrhea which may cause hemoconcentration and dehydration and increase serum lithium levels. Further studies are required as there is limited literature. Considering that many patients who undergo bariatric surgery have mental illness and are on psychotropic medications, it is important to keep in mind the change in pharmacokinetic behavior of various drugs including lithium which may subsequently cause adverse effects.

No. 79

A Case of Haldol-Induced Syndrome of Inappropriate Antidiuretic Hormone Secretion: Case Report and Literature Review

Poster Presenter: Manan Gupta
Co-Author: Safa Rubaye, M.D.

SUMMARY:

Background: Syndrome of Inappropriate Antidiuretic Hormone Secretion (SIADH) is characterized by increased level of Antidiuretic Hormone (ADH) from the posterior pituitary gland resulting in increasing of water retention and hyponatremia 1. It has been reported that Haldol and other psychotropic drugs are associated with SIADH 1–8. In this article, we are reporting a case of SIADH induced by Haldol and reviewing literature about this rare side effect. Case History: A 34-year old Caucasian Male with history of hypertension and unspecified mood disorder who was transferred from jail and hospitalized for suicidal attempt. Three weeks prior to the admission, the patient was started on Haldol 2 mg at bed-time, while he was in jail, for "mood swings". Abruptly, his sodium level decreased to 116 mmol/L. He was admitted to the hospital for hyponatremia and put

on fluid intake restriction to 1.5 L/day and fluid replacement. Hydrochlorothiazide and Losartan were held as well. The patient was discharged back to jail with a level of 131 mmol/L. Upon discharge, hypertension medicines were restarted. Ten days later, patient was presented to ED with chest pain. Primary team consulted psychiatry for medication recommendation and safety risk assessment. Accidently, sodium level was found to be as low as 114 mmol/L. SIADH was on the deferential diagnosis list due to the presence of hyponatremia, polyuria and polydipsia. Psychiatry recommended stopping Haldol on day 3 of admission. After stopping Haldol, sodium level increased to 136 mmol/L after (day 5). Discussion and Literature Review: In this case, we describe a patient who presented with accidental hyponatremia after three weeks of starting Haldol. Sodium level was corrected by discontinuing the Haldol. Five other cases of Haldol-induced SIADH were reported 2–6. Literature review shows a wide range of dosage and duration of treatment may cause SIADH. A dosage as low as 2mg may cause hyponatremia. However, the duration of treatment varies from few weeks to years. In conclusion, Haldol-induced SIADH is a very rare but serious possible side effect of Haldol and should be on the differential diagnosis list of patients presented with hyponatremia. Detailed work up and treatment is important to diagnose and treat hyponatremia. However, the only effective treatment is discontinuing the causative agent. It is unclear whether dosage and duration of treatment play a role in inducing SIADH as the dosage ranges from 2mg to 80mg. It is also unclear if the presence of predisposing factors is important to develop SIADH in patient on Haldol.

No. 80

Clozapine: The Protean Culprit

Poster Presenter: Samantha Kamp, M.D.

SUMMARY:

M was a 70 year old woman with a documented history of schizophrenia, intellectual disability, seizure disorder, hypothyroidism presenting with painless jaundice in the setting of a biliary tract neoplasm at the confluence of the right and left hepatic ducts. She was on levothyroxine, Donepezil, hydrochlorothiazide, Hydroxyzine, Clozapine and Lovenox among multiple PRN medications. She was admitted to the hospital for a planned ERCP but was found to have an prolonged PTT to 71, also found on previous recent labs. Patient was admitted to the medicine-psychiatry floor to work-up her PTT and assist with medical management. During her lab work-up it was found that in addition to an elevated aPTT, she had an elevated direct and indirect bilirubin, AST, ALT and Alk Phos. Hematology was consulted to assist with the case. It was noted that the patient's 50:50 mixing study did not correct (indicating that she had a circulating inhibitor) and she also had a positive lupus anticoagulant (which can cause a prolonged PTT). Given these alarming findings and the implications for the patient, Oncology was consulted on hospital day 3 to comment on prognosis with and without the procedure given Ms. M's complicated status and concerns that she would appear to require both high-dose steroids (which could cause a psychiatric decompensation) +/- cyclophosphamide and apheresis. Ms. M received pan-scans with results that matched those obtained as an outpatient. Oncology was able to provide that given the likely diagnosis, the patient would likely not have a very long life but the likelihood of the complication of cholangitis and death would rapidly shorten her expected lifespan without receiving an ERCP. Given that the patient did not have capacity to make complicated medical decisions, her Health Care Proxy was reached out to. Given that her proxy was suffering from advanced dementia, it was felt that she would require a new HCP to assist her in decision making. Her remaining relatives, who had not seen her in years, were agreeable to a family meeting and after a great deal of discussion, Ms. M chose a new HCP, who agreed to her need for ERCP despite the risks from treating the elevated PTT. Due to consultation by Hematology-Oncology with outside sources, it was shortly thereafter found that the prolonged PTT and positive lupus anticoagulant were secondary to clozapine and the patient was not at increased bleeding risk. Indeed, she was increased clotting risk. Her ERCP quickly proceeded with no need for the extensive treatments discussed so extensively. Shortly after this she was discharged home on Lovenox and a decreased Clozapine dose.

No. 81

Gabapentin: Culprit or Cure? A Case Report
Poster Presenter: Selcuk Uremek, D.O.

SUMMARY:
Background: Very little is known about sudden gabapentin cessation, making its management a unique challenge. There are 23 reported cases of gabapentin withdrawal. 6 of these potentially described encephalopathy with agitation. **Case:** A 57-year-old man reportedly taking gabapentin 3600mg daily with history of stroke, hypertension, hyperlipidemia, atrial fibrillation, type 2 diabetes, COPD, asthma, chronic pancreatitis, cocaine abuse, tobacco abuse, frequent falls, and obesity was admitted to the hospital after a falling on his chest, resulting in rib fractures. On arrival, he was found to be retaining urine with acute kidney injury and in diabetic ketoacidosis. He was admitted to hospital for continuous pain management and treatment of kidney injury and ketoacidosis. On day 1 of admission, he had altered mental status and it was thought to be secondary to the opioids he received and metabolic acidosis. On day 2 of admission, he exhibited threatening behavior and psychomotor agitation. Over the next 6 days, the medical team treated metabolic acidosis, hyperkalemia, acute anemia, and acute kidney injury secondary to obstructive nephropathy, and they ruled out alcohol withdrawal delirium, urinary tract infection, hepatic encephalopathy, vitamin B-12 and folate deficiency, and iron abnormalities. ANA was negative. Head CT was negative. CT chest and abdomen positive for rib fractures only. Urine drug screen was not done. During those 6 days he required multiple 4-point physical restraints, and was given benzodiazepines and antipsychotics due to violent and threatening behavior. Psychiatry was consulted and it was noticed that gabapentin was abruptly discontinued on admission. A decision was made to restart gabapentin on day 7. Within 24 hours, his motor agitation resolved and his mental status returned to baseline and he had no memory of being admitted to the hospital. He remained pleasant and cooperative until his hospital discharge on day 10. **Discussion:** Our patient presented with multiple risk factors for encephalopathy: (1)Brain vulnerability with history of stroke (2)Recent physical trauma (3)electrolyte and metabolic disturbance (4)Deliriogenic medications: opioids, benzodiazepines, and medications with anticholinergic effects. Knowing gabapentin increases GABA in the brain, we postulated that abrupt discontinuation of gabapentin could lead to decreased levels of GABA, leading to a rebound excitatory effect, presenting as confusion with psychomotor agitation. Gabapentin withdrawal may have contributed to a complicated multifactorial encephalopathy. **Conclusion:** Although there are no set guidelines to manage abrupt gabapentin cessation, this case demonstrates the need to keep the possibility of withdrawal from medications, including gabapentin, in mind when considering the differential diagnosis of acute delirium.

No. 82
A Case of Human Rabies Encephalitis and a Review of Neuropsychiatric Symptomatology
Poster Presenter: Marie Lyse Turk, M.D.
Co-Author: Lauren Solometo, D.O.

SUMMARY:
Human rabies cases in the United States are rare, with only 1 to 3 cases reported annually. The last time the Virginia Department of Health reported a human rabies case in Virginia was in 2009. A delay in the diagnosis of rabies may lead to fatality as almost all symptomatic patients die from this disease. Obtaining a travel history is often overlooked by healthcare workers (1). We describe the case of a 65 year old female with no past psychiatric history and no past medical history on whom psychiatry was consulted for management of agitation. The patient had no prior medical problems until 3 days prior to admission when she experienced a tingling sensation in her right arm, with pain gradually moving up to her right shoulder. She also developed intermittent shortness of breath and presented to an urgent care clinic and was given meloxicam and hydrocodone for her pain. The patient went to the Emergency Department the following day and had a Chest X-ray, troponins, and D-dimer tested and found to be normal. She was discharged home with Lorazepam for presumed panic attacks. The patient's symptoms worsened as she started experiencing hydrophobia, agitation and confusion. She was brought back to the Emergency Department and was admitted to the MICU for management of ST changes on EKG as well as confusion. A travel history was obtained at that

time and revealed that the patient was bitten by a stray dog while on a recent vacation in India. While in the MICU, the patient became increasingly agitated and required a total of 25 mg of Haloperidol, 1.5 mg of Lorazepam and 2.5 mg of Olanzapine over the course of the night. She was eventually intubated and was diagnosed with rabies via saliva PCR. Patient's respiratory and neurological systems worsened over the course of days and she died after 2 weeks. This case focuses on the importance of obtaining a travel history, the need to recognize the neuropsychiatric symptoms of rabies and the need to seek immediate medical evaluation after an animal bite as fatality from rabies could be easily prevented with prophylactic vaccination. (2)

No. 83

The Emergence of Mania in a Patient With Bipolar Disorder After the Use of Dextromethorphan/Quinidine: A Case Report and Literature Review

Poster Presenter: Marie Lyse Turk, M.D.
Co-Author: John Azer, M.D.

SUMMARY:

Nuedexta, a combination of Dextromethorphan and Quinidine, is an FDA approved medication for the treatment of pseudobulbar affect (1). Until now, there has been no case reports linking the use of Dextromethorphan / Quinidine with the emergence of mania. We describe the case of a 52 year old male patient with a history of Bipolar Disorder Type 1, who was admitted to the inpatient psychiatric unit for management of an acute manic episode. The patient had been enrolled in a research study that was testing the efficacy of Dextromethorphan / Quinidine in treatment-resistant depression and has been taking one capsule of Dextromethorphan / Quinidine per day, with each capsule containing 20 mg of Dextromethorphan Hydrobromide and 10 mg of Quinidine Sulfate. Before his enrollment in the study, the patient did not disclose that he carries a diagnosis of Bipolar Disorder. There was no evidence to suggest abuse of his prescribed Dextromethorphan / Quinidine or of any other substance. The appearance of his manic symptoms seems to be coinciding with the starting of his Dextromethorphan / Quinidine. Although 20 mg of Dextromethorphan Hydrobromide is a dose comparable to cough and cold preparations of the drug, Quinidine dramatically increases the levels of plasma Dextromethorphan due to decreasing its metabolism. The emergence of manic symptoms in our patient, who was stable for several years could have been secondary to Dextromethorphan / Quinidine use, or was simply due to the natural course of his mental illness. It is nevertheless important to highlight the possible risk of switching to mania which has not been previously documented or mentioned in the drug pamphlet. This case also focuses on the importance of retrieving psychiatric records before enrolling patients in a study in order to prevent the worsening of their illness and to obtain more accurate and non-confounding results.

No. 84

A Case Report of Tardive Dyskinesia Caused by Clozapine Withdrawal

Poster Presenter: Marie Lyse Turk, M.D.
Co-Author: Anita Louise Hammer Clayton, M.D.

SUMMARY:

Tardive dyskinesia affects 9% of patients who are treated with an antipsychotic medication (1). Clozapine has a low risk of causing extrapyramidal symptoms. Some studies also showed that Clozapine is effective in improving symptoms of tardive dyskinesia (2). Little is known about the risk of developing tardive dyskinesia as a result of decreasing or discontinuing Clozapine. We describe the case of a 23 year old woman, diagnosed with schizoaffective disorder, bipolar type, who developed tardive dyskinesia in the context of Clozapine non-compliance. The patient has been on Clozapine monotherapy for 3 years and her most recent dose was 150 mg daily. The only other medication that was added to her regimen was Lamotrigine to target her mood lability. She presented to the clinic for follow up with new onset jaw and tongue movements, and had an AIMS score of 13. She reported that she has been skipping some Clozapine doses. On follow up, her AIMS score decreased to 1 after resuming her full Clozapine dose. We will discuss the pathophysiology of tardive dyskinesia and how some antipsychotic medications can cause or alleviate symptoms of this disorder, including Clozapine. We will also expand on the potential relationship between the emergence of

tardive dyskinesia in the setting of Clozapine dose reduction or discontinuation, which was discussed in few case reports (3).

No. 85

Psychiatric Management of Patients With Wilson's Disease: A Case Report

Poster Presenter: Sahil Munjal, M.D.

SUMMARY:

Wilson's disease (WD) is a rare autosomal-recessive, inherited disorder caused by a mutation in the copper-transporting gene ATP7B affecting the liver and nervous system. About 30% of patients with WD may initially present with psychiatric symptoms, and diagnosis can be difficult to establish. The diagnosis is often delayed when psychiatric symptoms preceded neurological or hepatic involvement. These patients commonly undergo psychiatric treatment before they are diagnosed and get treated with specific chelation therapy. The mechanism of psychiatric symptoms in Wilson's disease is not clear. As they can occur at the start of the illness, they are not fully explained by the psychosocial impact of a medical condition. Initially it was thought that basal ganglia abnormalities led to various psychiatric symptoms through dopamine dysregulation. More recent studies have explored the role of copper and other microelements in schizophrenia and bipolar illness. Although the lifetime prevalence of psychiatric symptoms in WD patients is unclear, the estimated range is from 30 to 100% of symptomatic patients. Specific therapies for WD lead to a good life expectancy, adherence to medications and clinical monitoring should be warranted by a multidisciplinary approach, including a hepathologic, neurologic, and psychiatric careful evaluation along with education of those affected and their relatives. These patients do exhibit sensitivity to antipsychotic medications, Close collaboration with the medical team is essential in the long-term management of these patients. Treatment of psychiatric symptoms in WD may require slower titration of psychotropic medications and should accompany therapy for WD directed at the prevention of accumulation and the removal of copper. Even when severe psychosis is present, the aim of care should be full recovery, since patients may maintain remission for years after psychotropic medications have been discontinued. We present a case of a 37 yo male with multiple psychiatric hospitalizations, acute behavioral issues with irritability, poor frustration tolerance, lability, later diagnosed with Wilson's disease. His serum copper and ceruloplasmin levels low, urine copper levels were high. MRI of brain showed mild cerebral volume loss, evaluated by ophthalmology and the patient was positive for Kayser- Fleischer rings. We will present the challenges faced in the management of this patient and will review the literature on the treatment of psychiatric symptoms in patients with WD.

No. 86

Ziprasidone in the Treatment of Stuttering

Poster Presenter: Sahil Munjal, M.D.

SUMMARY:

Stuttering is a disturbance in normal fluency and time patterning of speech that is inappropriate for the person's age. The prevalence of stuttering is approximately 1% of the population, affecting an estimated 3 million individuals in the United States. Various factors like incomplete lateralization of abnormal cerebral dominance, genetic factors and overactive pre-synaptic dopamine systems in regions of the brain that modulate verbalization have been implicated in the etiology of stuttering. The dopamine hypothesis of stuttering explains that abnormally increased cerebral dopamine affects the balanced levels that maintain the basal ganglia circuits, which helps with timing cues in initiating speech. Pharmacologic research has suggested that older generation dopamine antagonist/ typical antipsychotic medications improve stuttering symptoms, but are associated with poorly tolerated adverse effects. Also, there has been evidence of atypical agents including risperidone, olanzapine, asenapine and aripiprazole in the treatment of stuttering. Till date, there is no published report on the use of ziprasidone which has a much favorable metabolic profile. Here, we present a case of stuttering resistant to speech therapy that remitted with ziprasidone. Mr. X is a 42 yr old male with a h/o Bipolar 2 disorder who presented to the outpatient clinic on the regimen of valproic acid, venlafaxine, clonazepam and risperidone for continued medication management. He reported that he had

been prescribed risperidone for many years for his stuttering by his previous psychiatrist to good effect. However, patient had significant side effects including hypertriglyceridemia and breast enlargement. The patient was weaned off the risperidone and Stuttering Severity Instrument (SSI) was administered and the score was compared to the score on this instrument on the ziprasidone. Patient had a total score of 31, which is a "moderate-severe" vs 21 which is a "mild" rating for adults with dysfluencies. Patient exhibited 16% vs 4% stuttering or dysfluencies in a reading task, 21% vs 8% dysfluencies in a descriptive task, 51% vs 13% dysfluencies in a conversation, 16% vs 0% dysfluencies in the counting speech task. Lastly, the prolongation of sounds lasted from 1-8 seconds vs 2 seconds. Overall as per the speech pathologist's evaluation, patient had improved significantly from his initial assessment. Patient's metabolic profile improved as well. This suggests that ziprasidone may be an effective and well-tolerated medication for the treatment of stuttering.

No. 87

Analysis of Simulated Patient Interviews as a Teaching and Resident Assessment Tool

Poster Presenter: Alexander C. L. Lerman, M.D.
Lead Author: Peter Spyrou
Co-Author: Katherine G. Nordgren

SUMMARY:

Rationale: Interviewing is a critical skill for both psychiatric and non-psychiatrist clinicians. Many patients fail to disclose important information, due to shame, fear of the interviewer's response, secondary gain, or a variety of other factors. Our current findings indicate that beginning interviewers tend to have difficulty with such patients. This training builds skills in understanding and engaging non-disclosing subjects, through a collaborative process of group and self-study (Shea 1998) Methods: Learners in our simulation center conduct videotaped interviews with professional actors portraying challenging patients (i.e. paranoid, self-deceptive, psychopathic). Videos are evaluated and rated by a team of trained learner/raters using scales to assess basic interviewing, empathy, and advanced interviewing techniques (identification of discrepancies, confrontation, management of interviewer's anxiety, etc. Every effort is made to reduce anxiety and engage learners in a non-judgmental, constructive and affirmative discussion process. Results are shared privately + included in didactic presentations to groups of learners. Further research data will focus assessment of skill development over training, and correlation between interviewing/formulation skills and other benchmarks of training progress. Interviews are conducted through the year, with feedback and assessment occurring thought the academic calendar. This program is already under way, and has generated > 100 hours of interview material. Evaluation plan: This advanced Simulated Interview program has been highly successful and generated interest and participation among residents. Unlike patient material, SP interviews have no privacy concerns and can be widely used in supervision, didactics and resident assessment. Qualitative assessments have added depth to evaluation and feedback to learners. Rating assessment tools focus on four domains: basic interviewing, empathy, formulation guided interviewing, rapport. The experience of rating interviews, and watching other learners engage the identical clinical scenario is unique to the simulated patient exercise. Both psychiatric residents and medical students have enjoyed participating.

No. 88

"Biggie," a Non-Disclosing Patient: A Clinical Exercise for Psychiatric Residents

Poster Presenter: Alexander C. L. Lerman, M.D.
Lead Author: Katherine G. Nordgren
Co-Author: Peter Spyrou

SUMMARY:

Patient distortion and non-disclosure (DND) is a ubiquitous behavior which frequently distorts patient outcome and triggers conscious and unconscious withdrawal on the part of the clinician. When detected and engaged, DND behavior represents a mental status finding which can offer unique insight into a patient's motivation and psychopathology. Indicators of DND include a distorted narrative (e.g. breaks in timeline, logical inconsistencies), non-verbal affective "tells" (e.g sighs, tears, changes in vocal tone), clinician "counter-transference" emotional response (e.g.

boredom, anxiety, feelings of incompetence, and psychological withdrawal)" Patients may or may not be aware that they are engaging in DND, which can be driven by a range of heterogeneous factors including anxiety, shame, and fear of clinician or institutional response to candor. This presentation represents an aggregation of data derived from videotaped interviews with a simulated patient presenting with relatively obvious factitious symptoms, and underlying problems of depression and chronic developmental trauma Methods: Formal evaluation of the clinician's interview rests on qualitative assessment of empathy, specific information that is or isn't elicited during the interview, and the clinician's capacity to develop a clinical formulation and treatment plan and communicate this to the patient. During the simulated patient (SP) interview, each patient starts from a position of relatively obvious non-disclosure, while simultaneously offering nonverbal cues and openings for more meaningful engagement. More information is provided if, and only if, interviewer follows up. Selection and placement of transactional "gates" put emphasis on non-linear interviewing strategies, including use of a global case formulation, "following affect", and integrating emotional support while identifying and engaging points of non-disclosure in the patient's presenting history. Evaluation plan: 22 psychiatric residents in their 2nd-3rd training years were presented with the same 15-minute Simulated Patient "Biggie". Interviewers were instructed to reach a decision of whether or not to hospitalize the patient by the end of the interview. Interviewers were assessed by non-blinded raters for a) discernment of patient's non-disclosure b) empathy and response to affective cues, c) persistence in patient assessment. Results: All interviewers correctly determined that the patient should be hospitalized. Qualitatively, interviewers appeared to be either frustrated or confused by the patient's falsified symptoms, and to adopt one of two postures, or oscillate between them: "Bobble-heading", i.e. nodding and making verbal affirmations excessively while providing no structure during the interview, in response to which the patient produced irrelevant material; "Templating", i.e. reverting to standardized mental status and DSM-driven interview questions of limited relevance.

No. 89

Severe Persistent Anxiety and Labile Mood: Remember Cannabis Withdrawal Syndrome!

Poster Presenter: Michelle Lynn Bryant, M.D.
Co-Authors: Nicole Abbot, M.B.B.S., Vinod N. Alluri, M.D.

SUMMARY:
After years of debate over the existence of cannabis withdrawal syndrome (CWS), proponents have realized its inclusion in the DSM – 5. It features multiple mood and somatic symptoms that could last up to a month. Psychiatric co-morbidity and co-morbid substance use disorders may complicate management and cause a more severe presentation. We present a case of a patient with CWS with prominent anxiety, and mood lability despite appropriate medication trials resulting in a prolonged and perplexing course. 41-year-old lady with a history of traumatic brain injury, cannabis and tobacco use disorders, schizoaffective disorder, and unspecified anxiety, presented with latency of speech, thought blocking, labile mood, disorganized thought process, heightened anxiety and inability to function. At the time of admission, she was continued on her home medications: lamotrigine, lithium, duloxetine, gabapentin, clonazepam, eszopiclone, and hydroxyzine. She was previously started on a clonazepam taper as an outpatient due to substance use problems, however due to concerns for benzodiazepine withdrawal clonazepam dosage was increased but with limited effect. During her hospital course, she fluctuated between being very irritable, to being more docile. She remained very anxious, paranoid and easily confused which resulted in non-fluent speech, and restlessness. She had neurological symptoms that included confusion, tinnitus, and headache. Brain MRI without contrast showed no significant abnormality. Initially quetiapine was added, which was later cross-tapered with fluphenazine which improved her paranoia and disorganized thinking. Duloxetine was increased from 60mg to 90 mg daily for anxiety. Lithium was initially increased from 600mg to 900mg for mood stabilization but was decreased back to 600mg due disturbances in coordination. Her blood pressure was elevated and was treated effectively with metoprolol. Her symptoms gradually improved

such that at the time of discharge she had regained functionality, her mood was pleasant, and anxiety was controlled. The DSM-5 suggests that up to one third of regular cannabis users experience withdrawal and it lists the following symptoms; irritability, anger, or aggression; nervousness or anxiety, sleep difficulty, decreased appetite or weight loss, restlessness, depressed mood, and somatic symptoms such as headache. Differentials for our patient's presentation included tobacco withdrawal, and benzodiazepine withdrawal from recent taper of clonazepam, however symptoms did not abate with nicotine replacement therapy or with increasing benzodiazepine dose, and persisted for weeks. Literature on treatment is sparse. Gabapentin and cannabinoid analogs have shown benefit (1). Lithium did not show efficacy over placebo (2). Cannabis use disorder and withdrawal syndrome could be more severe and complex in the presence of co-morbid psychiatric illness and substance use. More studies are needed on effective treatment options.

No. 90

A Case Report of Aripiprazole Leading to Pathological Gambling Activity

Poster Presenter: Michelle Tom

SUMMARY:

Aripiprazole is an atypical antipsychotic FDA approved for the treatment of schizophrenia and mood disorders and can be used as an off label to treat other psychiatric conditions, such as tourette syndrome and stuttering. It acts as a partial agonist at dopamine receptors with increased affinity for receptors D2 and D3. Some of the known side effects of aripiprazole include orthostatic hypotension, akathisia, anxiety, and weight gain. Recently, there have been increased reports of unexpected behavioral changes, such as decreased impulse control, that occurred with aripiprazole. Cases of gambling disorder have been reported as an adverse effect following treatment of psychosis with aripiprazole. Here, we present a case report of a patient with stuttering who developed pathologic gambling activity after treatment with aripiprazole. Gambling impulses subsequently resolved when aripiprazole was switched to Cariprazine, a D2 and D3 receptor partial agonist with high selectivity towards the D3 receptor.

No. 91

Delirium Prediction Utilizing Text Mining and Machine Learning Algorithms

Poster Presenter: Gen Shinozaki, M.D.
Co-Authors: Nick Bormann, Sivakrishna Kuragayala, Lindsey Gaul, Mason Klisares, Julian Robles, Jonathan Heinzman, Gabrielle Duncan, Sydney Jellison, Nicholas Coon, Theodosis Chronis, Kasra Zarei, Kumi Yuki, Sayeh Sabbagh, John Cromwell

SUMMARY:

Background: Delirium is a fluctuating level of consciousness that stems from underlying physiologic/medical disturbances. Current screening methods are designed to identify delirium once it is present. Electronic records in modern healthcare systems allow for the identification of at-risk patients by utilizing automated mathematical modeling. Through this approach, machine learning and predictive analytics can identify patients who are at risk for developing delirium from patients who have not developed delirium based on progress notes and lab data. This study aims to investigate the effectiveness of this approach and introduce the concept of using models for early identification of at-risk patients prior to the clinical onset of delirium. Methods: We examined records from two cohorts of patients: 1) general medicine patients, and 2) orthopedic hip fracture repair patients admitted to the University of Iowa Hospitals and Clinics. Delirium status was confirmed through chart review. Daily progress notes, lab data and patient demographics were obtained from the electronic medical record. Text mining, using latent semantic analysis , was employed to extract concepts from unstructured progress notes. Two independent concepts served as continuous features in subsequent models of delirium risk. Words highly associated with delirium cases (i.e. delirium, encephalopathy, EEG, etc…) were marked as stop words and removed from the analysis. Discretely encoded variables of albumin, BUN, WBC, AST, history of dementia, age, and BMI were included based on a previous machine learning model examining ~13,000 subjects, which demonstrated their importance as predictors. Statistica (v 12.3) and R (v 3.4.1) were used for

analysis. Results: 243 patients (93 positive for delirium and 150 negative controls) participated. The discrete variables and extracted concepts on these subjects were used in subsequent machine learning models. A neural network model provided the best results. 83 of 93 delirious patients (sensitivity 89.2%) and 133 of 150 controls (specificity 88.7%) were correctly predicted (accuracy 88.9%). When compared with discrete data alone, these results emphasize the value of the previously underutilized free text contained within the electronic medical record. Conclusion: Our data illustrate the strength of using predictive algorithms created from pre-existing data from patient charts. Future investigations will focus on patients who enter the hospital non-delirious and subsequently develop delirium. Our validated model will be executed repeatedly throughout their stay to identify potential lag time from positive algorithm-based screening to clinical recognition of delirium.

No. 92

Diagnostic Approach to an Active Duty Servicemember With an Evolving Presentation of Major Depressive Disorder and Psychosis

Poster Presenter: Savannah Lee Woodward, M.D.
Co-Authors: Robert Myslin, M.D., Laura Francesca Marrone, M.D.

SUMMARY:

One of the unique features of psychiatry is the complexity of the factors that contribute to the presentations of our patients. There is little in the literature, however, that discusses a multifactorial approach when assessing and evaluating a diagnostically unclear case. This poster will examine the case of a 20 year old active duty service member who presented with bizarre and atypical suicidal and self-harm thoughts with marked thought disturbance in the context of starting his School of Infantry training at the beginning of his enlistment. Throughout his month-long hospitalization, his presentation ranged from that of Persistent Depressive Disorder to Schizophreniform to Unspecified Anxiety, to the final diagnosis of Major Depressive Disorder with Psychotic features, and appeared to evolve with the initiation of each new pharmacologic intervention. We will discuss the extensive medical and psychological work up completed in this patient, with particular attention to his response to multiple neuroleptics and antidepressants, the results of extensive psychological testing, and ultimately a possible concern for a variant of Wilson's Disease. Additional considerations will include a complex stress diathesis construct examining how multiple social factors including a childhood characterized by periods of neglect and social isolation, maternal history of Bipolar Disorder and Alcohol Use Disorder, and Native American Reservation upbringing, may have contributed to this patient's initial decompensation in the setting of a highly stressful military training environment.

No. 93

The Delayed Diagnosis of Multiple Sclerosis in a Patient With Comorbid Posttraumatic Stress Disorder, Major Depressive Disorder, and Migraines

Poster Presenter: Heather Anne Jones, D.O.
Co-Author: Anil Sighal, M.D.

SUMMARY:

Mr. P is a 35 year old Caucasian male with a past psychiatric history significant for Post Traumatic Stress Disorder and Major Depressive Disorder with a history of comorbid chronic migraines who presented for a Neurology consult following a sixteen month delay in referral. On physical exam at this time the patient was found to have difficulty maintaining lateral gaze, hypersensitivity to pain sensation on the first rib on the right, a positive Rhomberg's test and an inability to do tandem walking or to stand on one leg for any period of time. A thorough review of systems revealed significant changes in vision, headaches, loss of balance, gait disturbance and dizziness for the past year. The patient was seen multiple times in a Veterans hospital system by a Psychiatrist and a Primary care physician during this sixteen month time period. The patient presented to his primary care physician on multiple occasions requesting a referral to Neurology for his persistent headaches. He was denied this request during multiple visits and his complaints were dismissed as psychiatric in nature. The Psychiatry notes indicate that he attempted to address these issues with this physician and he was dismissed and diagnosed with an axis two disorder due to his complaints and

worsening depression symptoms. No Neurological examination was ever performed at any of the eighteen Psychiatric and Primary Care visits. In this poster we discuss the difficulty in diagnosing multiple sclerosis in patients with comorbid psychiatric illness and the importance of a thorough Neurological examination in this patient population.

No. 94

Subjective Memory Complaints and Symptoms of Nightmare in the Elderly With Chronic PTSD

Poster Presenter: Moon Yong Chung
Co-Author: Sukhoon Kang

SUMMARY:

Objectives: The association between sleep disturbances wit nightmare and cognitive decline in the chronic PTSD has been putative and controversial in the elderly. We evaluated the relation between sleep problem with nightmare and cognitive function in the chronic PTSD patients. Method: 80 subjects with chronic post-traumatic stress disorder (PTSD) and without depression or neurologic disorders (mean age 67.2±6.1) were analyzed in this study. All the participants completed the Korean version of the consortium to establish a registry for Alzheimer's disease neuropsychological battery (CERAD-KN) as an objective cognitive measure and subjective memory complaints questionnaire (SMCQ). Based on the clinical interview and item of B-2 in the clinician-administered PTSD scale for diagnostic and statistical manual of mental disorders 4th (CAPS-IV), 3 points and more was categorized "nightmare (+)" and 1~2 points was defined "nightmare (-)". Results: All subjects were men, 42 with normal to mild nightmare and 38 subjects with moderate and severe symptoms of nightmare. PTSD subjects with frequent nightmare reported more depressive symptoms and more use of sleep medication, and showed higher SMCQ scores than PTSD with mild nightmare, but there was no difference in any assessments of CERAD-KN. In the regression analysis, depressive symptoms and sleep disturbance with nightmare were associated with subjective memory complaints (?=0.288, p<0.001; ?=0.189, p=0.005). Conclusion: In the elderly patients with chronic PTSD without depression, sleep disturbance caused by frequent nightmare was associated with subjective memory complaints, but not with objective cognitive measures. As subjective memory complaints might develop into cognitive disorders, clinicians should be aware of significance for subjective memory impairment at examining prominent symptom of nightmare in the elderly with chronic PTSD.

No. 95

So You Want to Start a Mental Health Film Series!

Poster Presenter: Harry Karlinsky, M.D.

SUMMARY:

The use of dramatic and documentary films as pedagogical tools to explore the stigma, representations and misrepresentations that surround mental illness and addiction is now well known and accepted. Towards this end, an increasing number of student/resident training programs, consumer and arts organizations, health care settings as well as academic institutions are now running ongoing film series and festivals to promote both public and/or professional education of matters related to mental illness and wellness. This abstract aims to share these real-world experiences by presenting a case study: the University of British Columbia's Frames of Mind Mental Health Film series. Initiated in 2002, Frames of Mind consists of monthly evening screenings (at the non-profit Cinematheque theatre in downtown Vancouver) of a commercial feature length dramatic film or documentary directly related to a particular mental health theme, which is then followed by a presentation and Q and A (see http://www.framesofmind.ca for further details). Over 15000 individuals have now attended the film screenings; over 100 community organizations have been involved as community partners and co-sponsors of specific screenings; and speakers have ranged from psychiatrists to individuals with lived experience to film directors. The "nuts and bolts" that underlie the successful operation of a mental health film series will be identified, including the requisite issues of film and speaker selection, marketing and promotion, partnerships, financial sustainability, choice of venue, community engagement, accessibility, safety and evaluation strategies. In anticipation that some Conference attendees may wish to establish similar programs in their own jurisdictions, and for those already doing

so, we also hope this poster generates interest in establishing a supportive community of practice of those involved with mental health film series. The envisioned benefits would include information sharing, the establishment of communal resources (such as inventory of mental-health films) and joint enterprises such as touring collaborations.

No. 96
Zelig's Syndrome: Reel or Real?
Poster Presenter: Harry Karlinsky, M.D.

SUMMARY:
In his film titled Zelig (released in 1983), Woody Allen introduced the world to the story of Leonard Zelig, a man who could seamlessly and involuntarily mirror the identities and, even more remarkably, the physical characteristics of those in his immediate proximity. Zelig could become, among other examples, an Oriental-looking man in a Chinatown restaurant, a corpulent individual in the company of the obese, and even a black trumpet player when drinking at a Chicago speakeasy (the film is anchored in the Jazz age of the late 1920s). Not surprisingly, Zelig's seemingly impossible transformations bring him to the attention of the psychiatric profession. Despite diagnostic and therapeutic missteps, professional boundary violations, and serious relapses along the way, Zelig's psychiatrist - Dr. Eudora Fletcher - eventually cures Zelig's unusual illness with an unorthodox approach involving reverse psychology, hypnotic trances, and unconditional love. Yet curiously, Leonard Zelig's story did not end with the closing credits of Allen's mockumentary. Reports began to emerge in the psychiatric literature of real patients with "Zelig-like" symptoms. Did Woody Allen anticipate a new psychiatric disorder? Could so-called Zelig's syndrome actually exist and, if so, by what underlying psychological and physiological means? This poster summarizes the relevant literature pertaining to "Zelig-like" phenomena, and draws particular attention to the following issues: the construction of identity, echophenomenon, mirror neurons, and the environmental dependency syndrome. Learners will be left with that old conundrum: does life imitate art or is it the other way around?

No. 97
Assessment of Social and Emotional Well-Being in Australian Aboriginal People
Poster Presenter: Aleksandar Janca
Co-Author: Zaza Lyons

SUMMARY:
Background: The assessment of Social and Emotional Wellbeing (SEWB) among Australian Aboriginal people is a complex and challenging task. Adoption of a yarning approach during an interview and demonstration of cultural competency and sensitivity is important. There are limited tools and instruments that can be used to assist in the assessment process. The aim of the project was to develop a culturally appropriate screening tool for the assessment of mental health problems in Australian Aboriginal people. The focus of our screening tool was on the current (i.e. here and now) mental health problems including the Aboriginal concept of SEWB. Consequently, the tool we developed was entitled Aboriginal Here and Now Assessment (HANAA). Methods: The initial phase of HANAA development involved consulting with key informants across Western Australia who work in the field of Aboriginal SEWB. A glossary of terms and concepts relating to SEWB was developed to identify ten key domains. These included physical health, sleep, mood, suicidality, substance use, memory, unusual experiences, functioning, life stressors and resilience. The HANAA is implemented by initiating a semi-structured interview that covers each of the domains. The respondent is encouraged to tell their story in the form of a narrative which is recorded by the interviewer. The aim is to determine if there is a problem or not, in each domain. At the end of the interview a 'recommended action' is determined. The HANAA was evaluated by exploring cultural applicability, feasibility, reliability and validity on a sample of 30 Aboriginal participants from urban and rural settings across Western Australia. Results: The cultural acceptability of the HANAA was rated highly. Reliability was good with agreements between Aboriginal and non-Aboriginal interviewers measured by kappa statistics ranging from 0.5 to 1.0. Overall agreement between interviewers on the narratives ranged from 60% - 96%. There was also good agreement between interviewers and treating

clinicians in identifying the main SEWB problem and recommended course of action. Conclusion: The HANAA is a culturally acceptable, valid screening instrument for the assessment of SEWB among Australian Aboriginal people. It can also be used as teaching and training tool for various types of mental health, general health and other professionals who deal with Aboriginal people in the context of education, legal and prison systems etc. This was an unfunded study.

No. 98

Creating a Self-Sustaining Naloxone HCL Education and Distribution Program for Families and Care Takers of Adolescent Opioid Users

Poster Presenter: Avaas Sharif, M.D.
Co-Authors: Tarek Aly, M.D., Jessica Bayner, M.D., Asghar Hossain, M.D.

SUMMARY:

Drug overdoses killed over 60,000's individuals across America in 2016, with a quarter of these deaths stemming directly from heroin; this is a 500% increase from 2010. As opioid use and availability sweep the country, one of the demographics that is being drastically affected is the adolescent population. Naloxone HCL is a well-known antidote, acting as an antagonist for heroin overdose with great results if delivered promptly. With Naloxone HCL being available over the counter in over 40 states now, family and friends can save their loved ones with swift action if they are educated to identify signs of how opioid overdose presents. We have designed a step-wise process on how to build a self-sustaining Naloxone HCL education and distribution program for families and caretakers of adolescents to help minimize heroin overdose causalities. Program targets can be broken down into three categories and several subcategories including: 1) product-centric goals, which explore everything from how to acquire and administer Naloxone HCL; 2) client consolidation goals, which address how to identify adolescents who are at risk of overdosing, as well as how to connect with their caretakers; and 3) family and friend education goals, which entail the distribution of a specific curriculum, designed to educate patients' families and caretakers about signs of overdose and how to administer Naloxone HCl. The goals of this establishing such a program, in addition to the obstacles of creating it will be discussed in detail.

No. 99

A Retrospective Study of Mental Health in the Southern Appalachian Collegiate Population

Poster Presenter: Brittani Lowe

SUMMARY:

The purpose of this research was to investigate and describe Appalachian college students seeking psychiatric care, and in particular, to determine if such students differed from studies of students in other areas of the nation. Southern Appalachia is a rural location with limited mental health availability, as well as being immersed in an epidemic of opioid and other drug use disorders. Teenagers and young adults in Southern Appalachia do not have as much access to health care as similar populations in urban locations due to a number of factors (lack of transportation, poverty, lack of mental health professionals, stigma/cultural issues.) These factors may be significant enough to create differences in psychiatric profiles manifesting in college students in this area. Such information would be critical in planning for appropriate treatment and access to care. To our knowledge, no data exists regarding the psychiatric disorders and characteristics of college students seeking psychiatric care in this region. We conducted a retrospective chart review of 100 college students who sought psychiatric care from an on campus psychiatric clinic at a southern Appalachian university (Marshall University). Data including gender, age, race, marital status, year in college, past psychiatric history, history of suicide/homicide attempt, current suicidal or homicidal ideation, current psychiatric diagnosis, and substance use disorders was collected, entered into SPSS, and analyzed. The results and a review of the literature will be presented.

No. 100

How Does Culture Affect the Therapeutic Alliance? Patients' Perspectives on Their Therapists' Cultural Identity and Cultural Competencies

Poster Presenter: Steven M. Kam, M.D., M.B.A.
Co-Author: Elliot Feld

SUMMARY:

Background: Psychiatric research on patients of all ethnic backgrounds has demonstrated that a strong working alliance is associated with improved adherence to treatment recommendations and therefore improved outcomes. Working alliance is also positively correlated with therapists' cultural competency; providers who are more adept in cross-cultural relationships are more likely to foster stronger bonds with their patients. Much of the literature has examined therapists' self-reports of cultural competency with fewer studies considering patients' perspectives of their therapists' cultural competency. Generally these studies have failed to demonstrate significant agreement between therapist and patient perspectives of the therapist's cultural competency. As such, the current study explored patients' perceived cultural competency (PCC) of their therapists, as well as the perceived cultural similarity (PCS) between themselves and their therapists. We hypothesized there would be a positive correlation between PCC and working alliance and were also interested in exploring the possible influence of PCS on working alliance and PCC. Methods: Adult patients (18 years and older) with recent attendance at the outpatient psychiatry clinic at Albany Medical Center were offered the opportunity to be included in the study. Participants voluntarily completed questionnaires consisting of: (1) demographic information; (2) perception of cultural similarity between themselves and their therapists (a four-point self-rated item); (3) the Perceived Cultural Competency scale (PCC); and (4) the Working Alliance Inventory-Short Revised (WAI-SR). Patients were invited to complete their questionnaires before or after their appointments with a total time commitment of approximately ten minutes. The results were examined with SPSS statistical software using linear regression analysis. Results: We collected responses from a total of 119 patients. The demographic distribution of participants was predominantly White (68.4%), female (66.9%), and Christian (63.2%). The average length of treatment was 10.75 months. Preliminary analyses were consistent with our hypothesis and suggested a significant correlation between PCC and WAI-SR total scores ($r = 0.63$, $p < .01$). We also found a significant relationship between PCC and PCS ($r = 0.42$, $p < .01$). PCS and WAI were not significantly correlated ($r = 0.14$, $p = .16$). Conclusion: Therapists' cultural competency appears to be related to the working alliance which is in turn important for positive treatment outcomes. As our society continues to diversify, it becomes increasingly important to be aware of the influences of cultural similarities and competencies on the therapeutic relationship.

No. 101

Attitude Toward Seeking Professional Help for Mental Health Problems in a South Korean Population

Poster Presenter: Yungseo Ryu
Co-Authors: Soyoung Lee, Jung Han Yong, Shin Gyeom Kim, Jeewon Lee, SangWoo Han, Sehoon Shim, Doohyun Pak, EunJee Kim

SUMMARY:
Objectives : The primary objective of the present study was to examine the attitude toward seeking professional help for mental health problems and disclosing mental health problems to others among the general population in Bucheon city. The secondary objective of the study was to identify factors associated with the attitude toward seeking professional help for mental health problems. Methods : A total of 1,075 community-dwelling adults completed a self-report measuring willingness to seek professional help for mental health problems, willingness to disclose mental health problems to others, past history and family history of mental illness, frequency of contact with the mentally ill, awareness of stigma and discrimination toward the mentally ill, and the attitude toward the mentally ill using the Community Attitude toward the Mentally Ill (CAMI) scale. Participants were categorized into Help-Seeking Group and Non-Help Seeking Group according to their attitude toward seeking professional help for their mental health . Student's t-test, chi-square test and fisher's exact test were used to compare various variables between the two groups. Regression analyses were performed to examine the variables affecting the attitude toward seeking professional help. Results : 783(72.8%) participants reported being positive and 292(27.2%) participants reported being negative toward seeking professional help for their mental health problems. 270(25.0%) participants reported they would neither seek professional help for their

mental problems nor disclose their mental health problems to others. Help-Seeking Group had more family history of mental illness and more frequent contact with the mentally ill than the Non-Help-Seeking Group. In CAMI scale, Help-Seeking Group showed higher scores in authoritarianism and social restrictiveness and lower scores in benevolence and community mental health ideology. Regression analysis showed that subjects who had more awareness of the stigma and discrimination toward the mentally ill were more willingly to seek professional help for their mental problems (OR=2.485, 95% CI (1.638-3.769), p<0.001). Conclusion : Factors that facilitate and inhibit one's willingness to seek professional help for mental health problems should be further evaluated in different sites and demographics. Considering the factors associated with the attitude toward seeking professional help for mental health problems could increase effectiveness of public education efforts in the community to reduce barrier to mental health services.

No. 102

Perspectives on the Happiness of Community-Dwelling Elderly in Korea

Poster Presenter: Jinwoo Kim
Co-Authors: Sang Won Jeon, Kang-Seob Oh, Lee Ung

SUMMARY:

Objective: A community survey was performed to investigate the factors and perspectives associated with happiness among the elderly in Korea (?60 years). Methods: Eight hundred volunteers selected from participants in the Ansan Geriatric study (AGE study) were enrolled, and 706 completed the survey. The Happiness Questionnaire (HQ), which asks four questions about happiness, was administered. To explore the relationship between happiness and depression, the Geriatric Depression Scale (GDS) and the Beck Depression Inventory (BDI) also were administered. Results: The participants' average level of happiness, determined using a 100-mm visual analogue scale (VAS) of the HQ, was 64.7±26.0. The happiest situations for most people were "getting together with family" (23.8%) and "living in peace with family members (well-being)" (13.2%). Frequent reasons for not being happy were "worsened health condition" (28.7% of the not-happy group), "economic problems of their own" (16.5%), and "economic problems of their children" (14.8%). The participants' choices regarding the essential conditions for happiness were "good health" (65.3%) and "being with family" (20.5%). The BDI and GDS scores were negatively related to the happiness score. A preliminary scale (Happy (Haeng-Bok, ??) aging scale) based on the HQ for measuring the happiness level of the Korean elderly was suggested for follow-up studies. Conclusions: The most important factors determining the happiness of the community-dwelling elderly in Korea were good family relationships, economic stability, and good health. A higher depression score negatively impacted happiness among Korean elders. Further studies on the factors in their happiness are required.

No. 103

The Association Between Weekly Working Hours and Symptoms of Depression and Anxiety in Korean Employees

Poster Presenter: Jinwoo Kim

SUMMARY:

Objective : The aim of this study was to investigate the association between weekly working hours and symptoms of depression and anxiety in Korean employees. Methods : We studied 76,043 employees who attended annual health screenings in 2014. Weekly working hours were assessed with a self-reported questionnaire and categorized in one of 3 subcategories: <52, 52-59, and ?60 hour per week. Symptoms of depression and anxiety were assessed with the Korean version of the Center for Epidemiologic Studies Depression scale and the Beck Anxiety Inventory, respectively. We used multiple logistic regressions to calculate odds ratios for symptoms of depression and anxiety according to weekly working hours category, after adjusting for age, gender, marital status, education, smoking, alcohol consumption, sleep duration, occupational stress and either anxiety or depressive symptoms. Results : The prevalence rate for depressive and anxiety symptoms was highest at more than or equal to 60 h per week. The odds ratio for symptoms of depression and anxiety in groups of ?60 h was 1.147 (95% CI 1.036-1.271) and 1.231 (1.062-1.426) times higher than the reference group (<52 h per week).

Conclusion : Prolonged weekly working hours was associated with symptoms of depression and anxiety in Korean employees. The results of this study might help determine permissible working hours to protect employees from mental health problems.

No. 104
WITHDRAWN

No. 105
Efficacy of Vortioxetine in Patients With Major Depressive Disorder
Poster Presenter: Samuel Leopoldo Romero Guillena
Co-Authors: Beatriz Oda Plasencia García de Diego, Olalla Santamaria, Reyes Navarro, Francisco Gotor

SUMMARY:
Background: Major depressive disorder (MDD) is a prevalent cause of loss of productivity, early retirement and absenteeism in Europe, and will be a leading cause of disease burden worldwide by 2030. Vortioxetine is an antidepressant with a multimodal mechanism of action which effectiveness and safety profile were established based on a series of clinical trials. The main goal of this study was to assess the efficacy (control of symptoms and functionality) of Vortioxetine in the treatment of major depressive disorder. Methods: This is a prospective observational 8-week follow-up study in a real setting. Population of study: patients >18 years of age with a diagnosis of MDD (according to DSM5 diagnostic criteria) with a score on Montgomery-Åsberg Depression Rating Scale (MADRS) of > 20 points, without any other psychiatric comorbidity, who initiated adjusted-dose Vortioxetine treatment (5-20mg/24h) in monotherapy and provided informed consent. Efficacy variables: the primary endpoint was changes in MADRS score at the end of the study with respect to baseline score. Secondary endpoints include changes with respect to baseline values in the overall score for anhedonia as assessed using the Snaith Hamilton Rating Scale (SHAPS), and functionality as measured using the Sheehan Disability Scale (SDS) at the end of the study. Also, the proportion of responsive patients (defined as a decrease of > 50% of the overall MADRS score) and in remission (defined as an overall score of < 10 on the MADRS) Evaluations were performed at baseline, 2, 4, and 8 weeks. Student's t-test and Chi-square test were used to assess differences between baseline evaluation and subsequent visits. Statistical analysis was performed with SPSS 22.0 Results: A total of 66 patients were included in the study (44 female and 22 male). With a mean baseline score of 29.7 (±5.3) on the MADRS and 7.5 (±1.2) on the SAHPS. The baseline mean score on the SDS-Work was 7.9 (±1.3), 8.2 (±1.3) on the SDS-Social life and 8.1(±1.1) on the SDS-Family life. We observed a significant decreased in the total score on: MADRS scale (Delta=20.5 ±8.7; p<0.01). Such decrease started after 2 weeks on treatment. SHAPS scale (Delta=3.2 ±1.5; p<0.05). Such decrease started after 4 weeks on treatment. SDS-work scale (Delta= 4.9±1.6; p<0.01). Such decrease started after 2 weeks treatment. SDS-social scale (Delta=4.4 ±2.1; p<0.05). Such decrease started after 8 weeks on treatment. SDS-family scale (Delta= 3.9±1.7; p<0.05). Such decrease started after 4 weeks treatment At the study end, the mean treatment response rate was 68.18%, whereas the mean remission rate was 54.4%; with a rate of treatment adherence of 78.78% Conclusions: This case-series study demonstrates that Vortioxetine is effective in reducing the symptoms of depression, and improves functionality in patients with major depressive disorder. This study does not have potential conflict of interest.

No. 106
Age and Chronobiological Characteristics in Treating Depression
Poster Presenter: Sergejus Andruskevicius
Co-Authors: Violeta Meiner, Giedre Vindasiene

SUMMARY:
Objective – to study the influence of age for circadian rhythms of the parameters of spectral analysis of heart rate variability in the treatment of depression. Methods. 68 patients have been studied (ICD-10: F 31.3 - 31.4, F 33.0 - 33.2). Mean age 43.8±10.4 years. The patients have been divided into two groups: group 1 – 40 patients (age 19 – 49 years) and group 2 – 28 patients (age 50 – 70 years). Severity of depression was determined in accordance with HAMD-17, the level of anxiety – in accordance with HAMA. Assessing the autonomous regulation of the cardiovascular system the spectral analysis of heart rate variability was applied. The

power spectrum density (PSD) of LF (low frequency) and HF (high frequency) range was established. The patients were examined at 1 a.m., 7 a.m., 1 p.m., 7 p.m. prior to the beginning of treatment, at the end of the first week of treatment and at discharge from the hospital. In order to determine the daily curve of changes in the indices under investigation the control group (15 mentally healthy people, mean age 44.9±9.3 years) was examined at 1 a.m., 4 a.m., 7 a.m., 9 a.m., 11 a.m., 1 p.m., 3 p.m., 4 p.m., 5 p.m., 7 p.m. in summer. Results. The primary more pronounced features of desynchronisation for the middle age people (group 1) were characteristic in the night and in the morning hours, for the old aged people (group 2) – in the day hours. Group 1 already at the beginning of the therapy has experienced the resynchronisation features. In the group 2 the desynchronisation was getting stronger during the whole day. By the discharge the resynchronisation was more completed in the middle age group (group 1). Conclusions. The investigation data show the reduction of compensation possibilities for desynchronising circadian rhythms by aging in the treatment of depression.

No. 107

Social Pain: A New Clinical Construct in Psychiatry

Poster Presenter: Shavonne Julien-Huang, M.D.

SUMMARY:

Ms. H was a 23-year-old Chinese graduate student at an American University. She was first seen in the emergency department after being referred by her counselor at the graduate school. Ms. H reported that for the past year and especially the last six weeks she had increased depressive symptoms; a significant amount of weight loss, increased insomnia despite over the counter medication, uncontrollable bouts of crying, and suicidal ideation. The only child of a high-ranking physician and governmental servant, she reported that since high school she was under increasing amounts of pressure to succeed. It appeared that any achievements she did reach were met with disdain. Ms. H appeared driven to do well no matter the consequence to her mental health and physical well-being. She shared that she had also been self-harming for some time, describing the first time injuring herself accidentally and enjoying the sensation. She characterized the incident as one in which her mental pain was “perfectly imitated” by the physical pain. She often cut as a form of punishment for her self-perceived failures and feelings of isolation. She described the shame of not only her” cutting” behavior but of her perceived inability to succeed. She reported that no matter the accomplishment she continued to become more depressed and the self-injurious behavior became progressively worse. The patient did not have many friends in the US, except for her boyfriend who lived in different state, and therefore felt completed isolated. She described having no one to support her emotionally during this increasing depression. Given her reported suicidality, lack of self-care, and lack of social support Ms. H was admitted for an extended observation and started on a low dose of Mirtazapine. Social pain is a reasonably new construct with increasing neurobiological evidence to support it. It can be described as the perception of pain following episodes of isolation, feelings of poor support, and/or the loss of support. Recent research has shown that both the unpleasant (affective) component of physical pain and social pain lead to an increase in activity of the dorsal portion of the anterior cingulate cortex and the anterior insula. In the above case, Ms. H likens her overwhelming but invisible social pain to her physical pain; she experienced all the factors that would make up social pain, from being isolated from family to a lack of support. It can be postulated that the patient chose to replace her feelings of rejection with something tangible that she could control, the physical sensations of her “cutting”. Social pain is not a concept that is often used in the psychiatric lexicon at present however, it is clinically relevant. Physical pain perception can be modulated therefore it may be worthwhile to research how the experience of social pain can be modulated as well. Social pain could come to be part of a patient’s biopsychosocial formulation and thus, their treatment.

No. 108

Differential Effects of Self-Harm and Chronic Pain on Pain Sensitivity in Patients With Depression: An Exploratory Analysis in a Convenience Sample

Poster Presenter: Srinivasa B. Gokarakonda, M.D., M.P.H.

SUMMARY:

Lead Author: Srinivasa Gokarakonda, MD, MPH Co Authors: Lakshminarayana Chekuri, MD, MPH; Jessica Carbajal, MD; Prasad Padala, MD; Pedro Delgado, MD; Ricardo Cáceda, MD, PhD. Background: Many individuals engage in Non-Suicidal Self Injury (NSSI) to gain relief from dreadful states of mind. NSSI is considered a way of externalizing emotional or psychological pain. There is evidence of decreased pain sensitivity (elevated pain threshold and tolerance) in patients with depression and suicidal and non-suicidal self-harm. It is hypothesized that NSSI and chronic pain have an additive effect on pain threshold elevation in depressed patients. Methods: This is an exploratory secondary analysis of data gathered from a voluntary convenience sample. One hundred and seventy individuals aged between 18 years and 65 years were recruited between January 2015 and April 2017 from mental health care inpatient units and ambulatory care settings. Individuals with a diagnosis of Major depressive Disorder, Bipolar Disorder and depression NOS and with a positive history of intentional self harm behavior and or chronic pain were recruited to groups 1-4. Group 5 consisted of 20 healthy individuals with no history of depression and chronic pain and intentional self harm behavior. Medial tibial pain pressure threshold algometry was measured by using a hand-held gauge with a 1-cm2 rubber tip. Standard clinical research measures such as Beck Depression Inventory-II (BDI-II), Beck Anxiety Inventory (BAI) and Columbia Suicide Severity Rating Scale(C-SSRS) were used to recruit individuals to the five groups. Analysis of variance (ANOVA) using SPSS 24 was used to compare continuous variables. Significant results were followed by Tukey's test. A general linear model was run with pressure pain threshold as dependent variable, presence of chronic pain and self harm as factors, and depression, self harm score, physical and psychological pain as covariates. Chi square tests were used to compare categorical data. Results: All four groups of individuals with a history of depression displayed higher pressure pain threshold when compared with healthy controls ($p = 0.024 - < 0.001$). Individuals with history of depression and comorbid history of intentional self harm behavior and chronic pain reported higher pain threshold when compared with other groups ($p<0.05$). Pressure pain threshold in depressed patients with either self harm or chronic pain alone were not different from depressed patients with neither self harm nor chronic pain. Depressed patients with a co-morbid history of self harm behavior and chronic pain reported higher pain threshold than other depressed groups ($p =0.004$) in this study. Conclusion: A history of intentional self harm behavior and chronic pain appears to have an additive effect on pain sensitivity in depressed patients.

No. 109

Change of Electroencephalogram Complexity After Electroconvulsive Therapy in Patients With Severe Depression: A Multi-Scale Entropy Study

Poster Presenter: Weicheng Yang

SUMMARY:

Background: Electroconvulsive therapy (ECT) is an effective and rapid treatment for patients with severe acute major depressive episodes. However,its mechanism remained unclear. In a clinical cohort receiving ECT, we compared the change of electroencephalogram (EEG) complexity before and after treatment using multi-scale entropy method, and explored difference of multi-scale entropy profile between remitted patients and non-remitted patients. Methods: Patients with severe major depressive episode (either major depressive disorder or bipolar depression) (N=130) requiring ECT were recruited. ECT was performed for a maximum of 12 treatments. Symptom severity was evaluated with 17-item Hamilton Depression Rating Scale (HAMD-17). Conventional EEG was recorded before and after ECT treatment, multi-scale entropy of EEG signal was calculated and compared between before and after treatment, and between remitted and non-remitted patients. Results: Among 130 patients underwent ECT, 116 patients completed treatment, 61 patients completed pre-treatment and post-treatment EEG and were subjected to analysis. Both patients achieved remission and non-remission have significant lower sample entropy at finer time scale (1-2) after ECT treatment ($p<0.001$ for remission group in all brain area, but in non-remission group prefrontal area showed no change, $p=0.117$, all p-value are corrected for multi-comparison). Only

remission group showed significant increase of sample entropy at coarser time scale (9) at left parietal area (p=0.049). Spearman correlation coefficient is calculated for change in symptom severity (HAMD % change) and sample entropy change (% change). Decrease of entropy at finer time-scale (scale 2) is significantly correlated to symptom improvement at central (p=0.034), right lateral frontal (p=0.022), left parietal (p=0.037) and left centro-parietal area (p=0.041). Conclusion: In depressive patients receiving ECT, sample entropy of EEG decreased significantly at finer time scales, and the change was correlated with clinical severity. It is possible that brain activity randomness increased at left frontal, left centro-parietal and left parietal area during depressive episode. Such increase in randomness may reflect local connectivity disturbance, and was normalized after ECT. However, there were no healthy control data for comparison, and further study is needed. This study was supported by Kai-Kaohsiung Municipal Kai-Syuan Psychiatric Hospital, Kaohsiung, Taiwan.

No. 110

Cross-Cultural Adaptation, Reliability, and Validity of the Revised Korean Version of Ruminative Response Scale

Poster Presenter: Won Kim

SUMMARY:

Objective Rumination is a negative coping strategy defined as repetitive and passive focusing on negative feelings such as depression. The Ruminative Response Scale (RRS) is a widely-used instrument to measure rumination, but there is continuing argument about the construct validity of the RRS, because of probable overlap between the measurement of depression and that of rumination. The RRS-Revised, which removed 12 items of the RRS, is suggested as a more valid instrument for measuring rumination. Therefore, we translated RRS-R into Korean and explored the reliability, validity and factor structure in patients with major depressive disorders. Methods Seventy-nine patients with major depressive disorder took the Korean version of RRS, RRS-R, State Trait Anxiety Inventory, Beck Depression Inventory and Penn State Worry Questionnaire. We performed exploratory factor analysis of RRS-R, and tested construct validity, internal reliability and test-retest reliability. Results The internal and test-retest reliability of RRS-R was high. Factor analysis revealed that RRS-R is composed of two factors. 'Brooding' factor explained 56.6% and 'Reflection' factor explained 12.5%. RRS-R, especially 'Brooding factor', was highly correlated with other clinical symptoms such as depression, anxiety and worry. Conclusions In this study, we find out the RRS-R is more reliable and valid than the original RRS in Korean patients with depression because the RRS-R is free from the debate about the overlap of item with BDI. We also revealed that 'Brooding' is highly correlated with depressive symptoms. RRS-R may be a useful instrument to explore the implication of 'Brooding' in depression.

No. 111

Association of Dopaminergic Polymorphisms With Cerebral Blood Flow in Psychomotor Retardation of Depression

Poster Presenter: Yingying Yin

SUMMARY:

Background: Several lines of evidence implicate dopamine is involved in the psychomotor retardation (PMR) in major depressive disorder (MDD). The cerebral blood flow (CBF) of PMR is also well investigated, which found abnormal CBF mainly in the cortico-basal ganglia-thalamo-cortical (CBTC) circuitry. We hypothesize that the polymorphisms of the dopaminergic pathway should be associated the abnormal CBF in the CBTC circuitry. Objective: To investigate the association of the polymorphisms throughout the dopaminergic pathway with the cerebral blood flow (CBF) of PMR in MDD. Methods: 107 antidepressant-free MDD patients were divided into PMR group (N=72) and NPMR (non-PMR) group (N=35) according to the Salpetriere Retardation Rating Scale (SRRS) score and underwent resting-state Arterial spin labeling magnetic resonance imaging (ASL-MRI). The ASL data were collected respectively for the CBF and calculation. The blood sample of 63 patients (23 PMR, 40 NPMR) were collected for genotyping the dopaminergic polymorphisms (92 SNPs from10 genes). After quality controlling, 15 SNPs in 8 candidate genes were entered into the mass univariate modeling analysis. For the statistical analysis, patients with

unqualified fMRI image and unmatched demographic data were ruled out. Consequently 56 patients (23 PMR, 33 NPMR) were taken into the statistical analysis. Results: Genotype-by-PMR associations with the CBF differences were identified for 7 SNPs with the lowest significant P values. The brain regions predominately distributed in bilateral prefrontal cortex (PFC), temporal cortex, and striatum, the left thalamus, the right primary motor cortex, insular cortex, fusiform gyri, and lingual gyri. The distribution of the significant brain region was similar in these genes. The genotype-by-PMR interactions at the CBF of these brain regions were also similar. The minor allele of DRD3_rs 6280 and SLC6A3_rs6347, and the major allele of other SNPs significantly increased the CBF. There were significant negative correlation between the CBF of the PFC and the PMR severity. However, the CBF of the striatum and the thalamus were positively correlated with the PMR severity. Conclusions: The polymorphisms of dopaminergic pathway are associated with not only CSTC circuitry, but also some other brain regions involving in cognition and emotion controlling. The minor alleles of DRD3_rs 6280 and SLC6A3_rs6347, and the major alleleminor allele of other dopaminergic polymorphisms might play a protective role in PMR. While the increased CBF of PFC might suppress PMR, the increased CBF of striatum and thalamus adversely aggravate PMR.

No. 112

Meningioma and First-Time Onset Depresive Epsiode

Poster Presenter: David Schwartz, M.D.
Co-Author: Asghar Hossain, M.D.

SUMMARY:

Introduction: Meningioma – a tumor, usually benign, slow-growing, arising from meningeal tissue of the brain. This is common type of tumor that originates in CNS. The prevalence of pathologically-confirmed meningioma is estimated to be approximately 97.5/100,000 in the United States with over 170,000 individuals currently diagnosed with this tumor. Relatively big sizes of meningioma determine the brain damage by “pressure like” effect and consequently neuropsychological changes in patients. Objective:The objective of this article is to report a case of depression with meningioma and emphasize the reasons why these psychological changes occur. Discussion: There are studies which show correlation between brain tumor and depression. Because most meningiomas grow very slowly, symptoms often develop gradually, if they develop at all. Most common symptoms are: worsening headaches, mood disturbances, seizures, blurred vision, weakness in arms and legs numbness, speech problems. Pressure-like effect or “disconnection” of interrelated brain areas can cause significant problems. It is important to estimate brain tumor size and type in terms of developing symptoms. .Another important biological mechanism of depression is stress-related hyperactivity of the hypothalamic-pituitary-adrenal (HPA) axis. Chronic stress significantly diminishes feedback inhibition of glucocorticoid-induced reduction of HPA axis and thereby increases corticotrophin-releasing hormone (CRH) secretion. As a result expression of proinflammatory cytokines, including tumor necrosis factor-? (TNF-?), interleukin-1 (IL-1), interleukin-6(IL-6), is the main underlining mechanism of clinical

No. 113

Does the Aftermath of 9/11 Still Exist? Delusional Disorder Versus PTSD After 9/11

Poster Presenter: David Schwartz, M.D.
Co-Authors: Asghar Hossain, M.D., Javeria Sahib Din

SUMMARY:

Background The 9/11 terrorist attacks shook the persons residing not only in New York but also those living outside USA. In initial evaluations, it was estimated that approximately 500,000 persons will develop PTSD following the event. Volunteer organizations reported stress reaction and adjustment disorder as the most common reported symptoms. Difficulty concentrating, difficulty sleeping, re-experiencing the event, nightmares etc. were some prevalent symptoms reported. Methods Literature on psychosis and use of psychotropic medications after 9/11 is reviewed from 2001 onwards. Database used is PubMed and Cochrane. Objective There is extensive data on PTSD after 9/11 incident, but little is known about association of a national catastrophe with psychosis or delusions. In our paper, we have discussed cases of psychosis reported after 9/11 incident. Hence, the purpose of

this review is to determine a positive correlation, if any, between psychosis and traumatic life event. Conclusion We found a positive correlation between traumatic life events and psychosis. From literature review, we found cases reported for psychosis after the 9/11 incident. There was an increase in the dosage of psychotropic medications used in NYC after the terrorist attack. Those patients who had a history of psychosis, developed delusions following the event. Australian inpatient hospital survey reported an increase in delusions in psychiatric patients after watching media footage of the incident. Hence, our patient possibly suffered from delusional disorder secondary to the trauma related to 9/11 attacks.

No. 114

An Atypical Presentation of Trauma in an Older Patient

Poster Presenter: Ayotomide E. Oyelakin, M.D., M.P.H.
Co-Authors: Oluwole Jegede, M.D., Alexander Maksymenko, M.D., Ayodeji Jolayemi, M.D., Tolulope A. Olupona, M.D.

SUMMARY:

Introduction: Older patients who have experienced trauma in earlier years tend to present differently compared to the younger age group. The elderly population is expected to exceed 70 million by 2030 necessitating the need for in-depth understanding of the sometimes different clinical presentation of symptoms of posttraumatic stress disorder (PTSD) in that population. Trauma in the elderly is complex and often complicated by the presence of comorbid psychiatric diagnoses which may mask the way such cases present clinically. Role changes and functional losses including physical and cognitive impairments could also make coping with memories of trauma in earlier life more difficult for aging patients, and impact the way they present to the clinician. Case Summary: We present a case report of a 75-year-old African American female patient who was initially diagnosed with Schizoaffective disorder four years before her current presentation. At presentation, the patient appeared psychotic, and was disorganized in her speech and thought process. On further psychiatric evaluation, she revealed a past history of multiple trauma including rape, gunshot injury and traumatic loss of a grandchild. Most significant, she reported re-awakened memories of an incident of a rape 54 years ago which triggered her current acute presenting symptoms. Evaluation revealed that these symptoms were triggered by a smell and that led to the deterioration in her mental state. Patient had a strong avoidance of emotions and suppression of feelings preferring not to discuss her re-experiencing symptoms. The patient scored 20 on the PCL-S PTSD Checklist, 20 on Mini-mental State Examination (MMSE) and 16 on the Montreal Cognitive Assessment (MOCA). During the course of admission, the patient was initially placed on Haloperidol 4mg daily which was discontinued when she was diagnosed with Trauma related disorder. Sertraline 25 mg PO daily was prescribed with good response and resolution of presenting symptoms. Discussion: It is of note that in elderly patients like our patient, the clinical presentation might not meet the DSM-V criteria for PTSD; however, remembering or reliving the trauma could cause considerable distress and present as some other psychiatric illness such as psychosis, major depression, and severe anxiety. This brings to play the importance of a thorough history and evaluation in ruling out other psychiatric diagnoses from trauma related disorders in elderly patients. Conclusion: There is limited available literature on the presentation of trauma in older adults who have had traumatic experiences at an earlier age. Symptoms of past trauma in the this group of patients may be delayed and may show atypical features leading to a challenge in diagnosing as patients often present with symptoms suggestive of other psychiatric illness. A thorough evaluation and exploration of the past psychiatric history is imperative for a definitive diagnosis and effective management.

No. 115

Bariatric Surgery Complications and Posttraumatic Stress Disorder: A Case Report

Poster Presenter: Shivnaveen Bains, M.D.
Co-Authors: Kanwalnaveen Bains, M.D., Rochaknaveen Singh Bains, M.D.

SUMMARY:

INTRODUCTION: There is very limited data available describing the impact of bariatric surgery complications on patient's mental health and risk of

developing Post traumatic stress disorder. In this case report we explore the relationship between bariatric surgery complications and PTSD. CASE: We present a case of a 56 y/o female with h/o HTN, GERD and depression s/p Gastric Bypass surgery for weight loss who presented to Visceral Inflammation and Pain Center for psychiatric evaluation. Patient had GBP surgery in 2008 and was eventually diagnosed with distal esophageal diverticulum for which she had a prolonged hospital stay in relation to laparoscopic diverticulectomy with conversion to laparotomy, lysis of adhesions, revision of prior gastric bypass. However, she developed complications which resulted in spleen injury requiring splenectomy and multiple surgeries for subsequent infections and endured 14+ surgeries which significantly decreased her quality of life. Patient reported h/o nightmares at night and flashbacks accompanied with hypervigilance and avoidance of hospitals. On examination, she reported her mood as sad and depressed with blunted and tearful affect, she appeared hopeless about her future and expressed feeling of guilt but denied any SI/ HI. She was diagnosed with MDD, single episode severe without psychotic features and Posttraumatic stress disorder from medical traumatization. Patent's depression was managed with Celexa 40 mg once a day, Wellbutrin 75 mg BID and prazosin 2 mg QHS for nightmares at night and Cognitive behavioral therapy. DISCUSSION: Adequate psychiatric follow after the surgical procedure is necessary to enable a long-term stabilization of patients with mental co-morbidities. Dietary regimens before and after bariatric surgery often create the perfect environment for serotonin depletion and makes patients vulnerable for worsening of depression. Post-operatively, patient's diet is limited to protein and supplements to prevent vitamin and muscle mass. Post-operative complications of GBP surgery can lead to significant mental trauma progressing to PTSD and worsening of depression. CONCLUSIONS: Furthermore, longer studies are needed to better define whether bariatric surgery has a positive or negative effect on the mental health of patients and to study the impact of surgical trauma. No doubt most bariatric surgery programs require pre-operative psychiatric evaluation, this case shows the importance of regular post-operative psychiatric follow up and considering PTSD as differential diagnosis.

No. 116
WITHDRAWN

No. 117
Posttraumatic Stress Disorder in Raped Victims: Applicability of Interpersonal Psychotherapy
Poster Presenter: Cecília Roberti Proença, M.D.
Co-Authors: Andrea Feijo-Mello, M.D., Ph.D., Euthymia Prado, Thays Mello Ferreira Milan, Janaina Cruz, Luciana Nóbrega, Mariana Maciel, John C. Markowitz, M.D., Marcelo Mello, M.D., Ph.D.

SUMMARY:
Background: An estimated 18% of women suffer sexual abuse during their lifetime. Among them almost half develop posttraumatic stress disorder (PTSD) following the trauma. Prolonged Exposure Therapy (PE), a technique of cognitive behavior therapy is considered the most efficacious treatment but has high rates of dropout. Markowitz et. al proposed that a non-exposure therapy as Interpersonal Psychotherapy (IPT) adapted to the treatment of PTSD (IPT-PTSD) might have similar efficacy and better adherence. **Objective:** The aim of this study is to assess the applicability of IPT for the treatment of women with a confirmed diagnosis of PTSD between one and six months after being raped. **Methods:** The present study was initiated in October 2015, and it will enroll patients until 2018. In this two arm randomized controlled clinical trial raped victims who developed PTSD are receiving IPT-PTSD or sertraline delivered as standardized treatment. Sample: A subsample of 24 patients who received IPT-PTSD was analyzed. Four trained psychotherapists applied IPT-PTSD ("Treatment Manual: IPT for PTSD" (reproduced with permission of the authors). Sessions were supervised by expert IPT psychotherapists and recorded to certify therapy quality. Instruments: To confirm the diagnosis of PTSD and assess the evolution of symptoms of PTSD, anxiety and depression, the following instruments were used: MINI (Mini International Neuropsychiatric Interview); Clinician-Administered PTSD Scale (CAPS-5), Beck Depression Inventory (BDI) and Beck Anxiety Inventory (BAI). **Results:** Until this moment, nineteen out of twenty-four patients

completed the IPT treatment. The dropout rate was 16,6%, while the absenteeism rate was 22,8%. Women who received IPT experienced significant reduction in PTSD (p=0,001), depressive (p<0,001) and anxiety (p=0,002) symptoms. **Discussion:** This may be the first formal study of IPT for PTSD specifically due to sexual trauma. It is possible that IPT, focusing on feelings to help patients understand relationships, may fit raped victims particularly well. Dropout rates from PE usually range from 10–44%, so our findings suggest that IPT could be an interesting alternative therapy for this group of patients.

No. 118

Posttraumatic Stress Disorder in an Adolescent With Inflammatory Bowel Disease-Related Medical Trauma

Poster Presenter: Deepan Singh, M.D.
Co-Author: Surinder Moonga

SUMMARY:

The incidence of Post-Traumatic Stress Disorder (PTSD) after bowel surgery for Inflammatory Bowel Disease (IBD) has not been well described in the literature. This could be due to low incidence or lack of recognition amongst patients and clinicians. This report describes a fifteen-year-old female with a past medical history of Crohn's disease who presented with dissociative symptoms. These episodes were recognized to be a symptom of underlying PTSD from medical trauma related to IBD. To confirm, the Child PTSD Symptom Scale (CPSS) was administered, with higher scores indicating greater functional impairment. On initial presentation, her Part 1 score was 41 (max 51, min 0) and Part 2 graded YES 6 NO 1. In particular, her symptoms of hypervigilance, avoidance and negative alterations in both mood and cognition stood out. She was treated with sertraline, gradually increased to a dose of 100mg, and Cognitive Behavioral Therapy (CBT). The CPSS was administered again after two months of her treatment. Her Part 1 score was 21 with Part 2 graded YES 3 NO 4; this signaled significant improvement and remission from PTSD. The patient's depersonalization events have completely resolved along with her nightmares and hypervigilance. Over six months from initial presentation, the patient remains in remission from PTSD symptoms. Surgery is generally not considered trauma in the eyes of the clinician, though it may have a lasting effect on younger populations. Multiple physicians, and even a mental health professional, did not consider PTSD in this patient given the lack of exposure to "classically" traumatic experiences (violence, rape, war, etc.). Thus, it is likely that patients with similar presentations to our patient may go undiagnosed if not screened for the possibility of PTSD. If diagnosed earlier, this patient could have avoided life-impairing emotional distress as well as expensive medical workup. Although post-surgical PTSD in adolescents has not been commonly reported, screening patients for psychiatric pathology after bowel surgery could potentially avoid life-impairing emotional distress in patients with IBD.

No. 119

Ketamine and Mindfulness Therapy in PTSD Treatment

Poster Presenter: Esther Bilenkis, D.O.

SUMMARY:

Introduction: PTSD is a debilitating disease which has been found very difficult to treat and has a high relapse rate after treatment. TIMBER, or Trauma Interventions using Mindfulness Based Extinction and Reconsolidation for trauma memory has been shown to be an effective, personalized treatment for eliminating PTSD and when combined with ketamine, results are evident within four hours. Ketamine is the only pharmacological agent whose mechanism of action allows results within hours. This property lends to its great benefit in treatment of serious psychiatric disorders such as PTSD. Case Report: We present the case of a Biracial female who has been discharged from our care. Her PTSD has been cured and she is maintaining well at 7 months after discharge and returned to work. She suffered from SLE, PTSD from physical and sexual trauma, throughout no medication. Her treatment included just one infusion of ketamine and 12 face-to-face sessions of TIMBER and home practice sessions daily twice and as needed Conclusions: Ketamine and TIMBER leads to rapid treatment of PTSD. The rapid-acting Ketamine and the reinforcement with TIMBER leads to long-lasting results and allows the patient to return to life before the illness.

No. 120

PTSD Severity and Demographic Comparison in a U.S. Active Duty Military Population

Poster Presenter: Joseph Mansfield, D.O.
Co-Author: Christopher Jorgensen, M.D.

SUMMARY:

Background: Posttraumatic stress disorder (PTSD) has become a growing mental health concern with nearly 1 in 12 Americans having a change to be effected by it in their lifetime. In the military population, the change of being effected is much higher, nearly double that of the civilian population. This study investigated the relationship between PTSD and demographics in a sample of active duty U.S. military members presenting for inpatient psychiatric hospitalization. Objective: To compare PTSD severity in an active duty military population in regards to the gender, race and age of the participants. Methods: A de-identified database of psychiatric inpatient information was used to investigate a relationship between the PTSD Checklist-Civilian (PCL-C) and the subjects' gender, race and age. The subjects were adults (18-50). Inclusion criteria included admission to the San Antonio Military Medical Center inpatient psychiatric ward and an ability to complete psychometrics. Results: Psychometric and demographic data of 314 U.S. Military patients over a span of 9 months revealed a mean PCL-C score range of 31.82-51.06. The PCL-C aggregate scores were found to be higher for males, Hispanics and age over 30 for gender, race and age respectfully. However when reviewing the 95% confidence interval range, the only demographic marker that approached statistical significance was age over 30. Conclusion: Increased age (>30) in the target population did show a significant increase in PTSD symptoms over those in the younger age ranges (<18 and 19-21). No other demographics showed statically significant differences in their scores. Need for better understanding of the interaction between gender, race and age to help better understand their role in development of PTSD symptoms is required.

No. 121

Neurobiology and Transmission of Trauma: A Literature Review of the Biologic and Cultural Expressions of Transgenerational Trauma

Poster Presenter: Kimberly Stubbs, M.D.

SUMMARY:

Clinicians, therapists, and researchers alike have explored the effects of trauma that is transferred from a first generation of trauma survivors to second and further generations of offspring of the survivors. This type of historical trauma is frequently referred to as transgenerational trauma, intergenerational trauma or a subtype of Post-Traumatic Stress Disorder (i.e. post traumatic slavery disorder, post traumatic slave syndrome) in professional literature. Identifiable groups of persons effected by intergenerational transmission of trauma include African Americans, American Indians, and the family members of Holocaust survivors and War Veterans. These groups will be used to illustrate the residual effects of trauma for the purposes of this poster but is not an exhaustive list. Trauma is a relatively common chief complaint and/or precipitating factor seen by Mental Health clinicians and therapists. However, professionals continue to grapple with the intersection of neurobiology and an environment characterized by significant historical trauma. Common questions raised during the study of this intersection include: "What conscious or unconscious processes are involved in the transmission of trauma? Are there epigenetic factors? What are the clinical implications of historical trauma?" Incorporating knowledge of the hypothalamic pituitary adrenal axis in the response to stress and including a transcultural framework, researchers are addressing each of these questions. The purpose of this literature review is to discuss the neurobiology associated with trauma and clinical methods that will likely prove useful for understanding and transforming the impact of historical trauma.

No. 122

A Case of Drug Rash With Eosinophilia and Systemic Symptoms (DRESS) Associated With Valproic Acid and Olanzapine

Poster Presenter: Lee Ung
Co-Authors: Sang Won Jeon, Kang-Seob Oh, Jinwoo Kim

SUMMARY:

Drug rash with eosinophilia and systemic symptoms (DRESS) syndrome is potentially life-threatening, medication-induced hypersensitivity reaction with long latency. It is characterized by fever, rash, leukocytosis with eosinophilia, atypical lymphocytosis, and internal organ involvement. The most common causes of DRESS syndrome is sulfonamides and anticonvulsants such as carbamazepine, lamotrigine. However, valproic acid and olanzapine could develop DRESS syndrome. We report a case of DRESS syndrome associated with valproic acid and olanzapine in 41 years old male patients with bipolar disorder.

No. 123

Natural Course of Posttraumatic Symptoms in Late-Adolescent Maritime Disaster Survivors: Results of a 12-Month Follow-Up Study

Poster Presenter: Lee Ung
Co-Authors: Sang Won Jeon, Kang-Seob Oh, Jinwoo Kim

SUMMARY:
This study is a prospective observational study on 75 late-adolescent survivors of a large passenger ship accident from immediately after the accident to one year later. Assessments of student survivors were conducted on day 2 and at months 1, 6, and 12. The PTSD Checklist (PCL), Patient Health Questionnaire-9 (PHQ-9), State subscale of the State and Trait Anxiety Inventory (STAI-S), Athens Insomnia Scale (AIS), and Brief Resilience Scale (BRS) were administered. When the assessments for day 2 and month 12 were compared, all the scales, except the PCL-avoidance subscale, showed a significant improvement in symptoms among males. However, among females, all the scales, except the PCL-re-experience subscale and the STAI-S, failed to show a significant improvement. All the symptoms for both males and females showed a pattern that decreased to the lowest level at month 1 (mandatory camp treatment period), then increased at months 6 and 12 (voluntary individual treatment after returning to school). The rapid deterioration of psychological symptoms was found during the chronic phase, when students returned to their daily routines and received voluntary individual therapy. There is a need to screen high-risk adolescents and be more attentive to them during this period.

No. 124

Analysis of Big Data From a Hospital Shows Haloperidol With an Increased Level of Serum Total Cholesterol

Poster Presenter: Jai Sung Noh

SUMMARY:
Background: The quality of medical information has been dramatically improved since the introduction of the electronic medical record system (EMR). Along with large sample sizes, the EMR system is not only easy to operate, but can also generate clinically relevant data with high quality without selection bias. Association of antipsychotics with metabolic syndrome is well known especially in atypical antipsychotics. Increased serum lipid level has been associated with antipsychotic treatment especially clozapine or olanzapine [1]. Haloperidol, a butyrophenone series of typical antipsychotic has been widely used for the treatment of schizophrenic disorders and other disorders with psychotic symptoms in psychiatric cares. Haloperidol has been known to have better serum lipid level effect than atypical antipsychotics. Here we tested the dyslipidemic effect of haloperidol using EMR data. Methods: We used a clinical database of an affiliated hospital [2] with a medical school located in Suwon, South Korea. Since its opening in 1994, this hospital has adopted the EMR system, which digitally collects and distributes patients' data to all of the departments in the hospital. The dataset used in this study is derived from this database with information such as admission, discharge, diagnosis, prescribed drugs and selected laboratory data for the period 1 June 1994 to 31 July 2013. This database contains information of total 461,170 patients with 4,920,758 prescriptions and 189467423 laboratory data. Extracting a dataset from this database to compare the levels of serum total cholesterol level before and after haloperidol usage. Results We selected 304 cases of data, 70% were males and mean age of the patients was 53 +/-17 years old. The levels of serum total cholesterol before and after haloperidol usage were 107 +/- 48.4 and 116 +/- 44.5 mg/dL respectively, and paired t-tests revealed that total cholesterol levels were significantly different (<0.05). Conclusion: Findings showed that an exposure to haloperidol could lead to an increase in levels of

serum total cholesterol. This suggest tha haloperidol would increase the risk of developing diabetes and coronary heart disease. Future study will be needed to discriminate direct and indirect effects of haloperidol on cholesterol level. Also we suggested that EMR data can be a valuable tool to investigate the effects of treatment on several clinical data.

No. 125

Unable to Regret: Travelling to Mexico Results in Lobotomy Performed Without Consent on Patient With Schizophrenia

Poster Presenter: Khalid Salim Khan, M.D.
Co-Author: Davin A. Agustines, D.O.

SUMMARY:

Background: Surgical intervention to treat serious mental illness is a topic that is shaded by a dark historical context. While psychosurgery for schizophrenia enjoyed increasing popularity during the early 20th century, it eventually fell out of favor due to the advent of effective antipsychotic medications. In countries where the informed consent process is not consistently used, however, patients can be subjected to invasive procedures without understanding what they entail. Numerous reports exist in non-scientific literature detailing forced lobotomy procedures that have occurred to patients living in various developing countries. Methods: Using a PubMed search, we found a single case of a patient with schizophrenia that had undergone prefrontal lobotomy in recent scientific literature (Kumagai 2016). We report on a case of a male diagnosed with schizophrenia, who while travelling to Mexico had a bilateral anterior capsulotomy performed without his consent. Results: Collateral information indicated that the patient had “bloqueo therapia” performed in Mexico. The patient and his family, however, were unsure of what procedure he had undergone. A subsequent CT scan of the head revealed findings indicative of an anterior capsulotomy or lobotomy procedure. Of particular note, the patient was persistently fatigued throughout the hospital admission, a symptom which has been correlated with the capsulotomy procedure. Discussion: The patient developed a known apathy syndrome, as well as tiredness from the procedure performed. His positive symptoms of psychosis remained, and required adequate treatment with Risperdal to minimize their intensity. As the utilization of psychosurgery for schizophrenia is essentially nonexistent in the US, it is important to realize that psychiatric interventions as well as the informed consent process may vary greatly in other countries when compared to the United States. Conclusion: Obtaining a detailed history of treatment approaches in patients that have received mental health services abroad can aid diagnostic formulation. It is important to recognize that negativism in schizophrenia with patients that have travelled abroad and received mental health services may be due to apathy secondary to psychosurgical procedures.

No. 126

Responsiveness of Depression to Parathyroidectomy in a Patient With Primary Hyperparathyroidism: A Case Report

Poster Presenter: Khalid Gamal Shehatto, M.B.B.S.

SUMMARY:

The incidence of primary hyperparathyroidism (PHPT) is about 21 cases per 100,000 person-years and is usually caused by a solitary parathyroid adenoma. Patients suffering from hyperparathyroidism may display a range of neuropsychiatric symptoms, including depression, anxiety, behavioral disturbances and psychosis, and reduced neurocognitive function. The diagnosis of pHPT may easily be missed if not suspected by the clinician and if the appropriate biochemical tests are not performed. The pathogenesis of psychiatric symptoms in PHPT remains unclear. Several studies suggest that surgical removal of the parathyroid adenomas may result in a clinical improvement of psychiatric symptoms. We present a patient with pHPT and treatment-resistant depression, where the level of calcium was in the normal range. His symptoms decreased in severity after surgery, and complete remission of symptoms on escitalopram. Our discussion of the case is placed in the context of the recent literature review on the topic of pHPT and neuropsychiatric symptoms. Mr. A, a 35-year-old man with long and recurring periods of depressive symptoms since the age of 12. He had recurring suicidal thoughts and one suicidal attempt using organophosphorus insecticide ten years ago.Most of

the antidepressants were tried including drug combinations beside ECT with partial response. He was on escitalopram 20mg od and duloxetine 60mg od. On early 2017, He developed acute anginal pain after which he was admitted for investigations, then he was diagnosed as pHPT and met criteria for parathyroidectomy.he was operated on February 2017. His depressive symptoms severity decreased with time. Currently, he is using escitalopram 10mg tab od with complete remission.

No. 127

Graves Disease-Induced Psychosis

Poster Presenter: Meelie Bordoloi, M.D.

SUMMARY:

Graves disease induced psychosis Co-authors Ravi Shankar, MD., Garima Singh, MD. Abstract We present a rare case study of a 44 y/o African American female who presented to the outpatient clinic with increased paranoia and auditory hallucinations. She reported that she was doing well in life until suddenly she started hearing voices on a Sunday afternoon in the month of March 2015 and within a period of 1-2 day she started hearing the voices all the time. There were multiple people talking inside her head. She reported that she was incapable of doing anything, she was unable to read, watch TV, had to quit her job in home health. She indicated that it limited her life so badly that she sought medical attention; her primary care physician started her on Olanzapine 2.5mg and referred her to psychiatry. She also had olfactory hallucinations including smelling perfumes and cooking odors that were not there, she had an MRI brain and EEG, which were unremarkable. She reported some response from the olanzapine but stated that she was scared to leave her house, felt that people were after her; they were plotting against her and her children. She has an adolescent child with developmental disability and she is the sole care giver to him and so did not want to go to the hospital and stated that she could take of herself. She also had some support from her church group. We titrated the olanzapine further to 10mg with some relief to the symptoms and did the basic lab work including TSH. Her vitals at the initial appointment were grossly normal other than mild tachycardia. Labs showed suppressed TSH, normal T3 and elevated free T4. On further evaluation, she also reported a one-month history of a chronic throat discomfort but otherwise denied any skin or hair changes, palpitations, diaphoresis, or hand tremor. She did not have gastrointestinal disturbances. Her energy level and mood had been stable. She noted occasional dry eyes with her contact lenses; no diplopia or other visual disturbances. She was referred to endocrinology for further management, they did a thyroid ultrasound, which was normal, but the RAI scan showed diffuse uptake indicating graves disease. So, she was started on Methimaxole 20mg for the hyperthyroidism. At the next follow up visit with the psychiatrist patient reported that she has been doing much better. She did not hear any voices for last 1 month. She has been back to school, looking for a job and reported that she has been able to focus, concentrate and take care of herself. Denied any side effects from the medication. The case we managed reminds us that psychiatric disorder can be manifestation of an endocrine disease and the importance of medical workup and physical examination in the course of treatment of mental disorder.

No. 128

Treatment of Agitation Associated With Hypoglycaemic Encephalopathy: Case Report and Literature Review

Poster Presenter: Muniza Majoka, M.B.B.S.
Co-Authors: Ramaswamy Viswanathan, M.D., D.Sc., Paulo Marcelo Gondim Sales, M.D.

SUMMARY:

Background:Hypoglycemia can lead to different symptoms ranging from diaphoresis, tachycardia, anxiety leading up to altered mental status, coma and convulsions [1], which characterize the presentation of hypoglycemic encephalopathy. Permanent neuronal damage can occur in the brain leading to due to varying severity and length of hypolycemia [2] The mechanism of brain injury in the brain secondary to prolonged and sever hypoglycaemia involves the increased level of extracellular glutamate, an alternative source of energy, which then leads to excitatory neurotoxicity and neuronal death by increasing intracellular calcium levels. Here we report the successful use of escitalopram in the treatment of agitation after

hypoglycemic encephalopathy that did not respond to treatment with other medications.Case Report:A 26-year-old gentleman with a history of insulin dependent Diabetes Mellitus, Hypertension, Stage 4 chronic kidney disease multiple previous episodes of profound hypoglycemia and poor glucose control on insulin pump presented to our emergency department after being found unresponsive in bed with a blood glucose level of 40 mg/dl and a GCS score of 7. He was intubated for airway protection and sedated initially with propofol and later with dexmedetomidine infusion. He was non-verbal with poor attention, disoriented and agitated with GCS 9 after extubation. Haloperidol and risperidone were use but led to ECG QTc prolongation and had to be discontinued, valproic acid and lurasidone had unequivocal effects. Over the next few weeks, he regained some verbal capacity but continued to be inattentive, disoriented with poor impulse control and agitated behaviour. He was found not to have decisional capacity and was maintained on constant observation for safety. The patient was then started on escitalopram 10 mg OD. Within the next two weeks of treatment, the patient's agitation episodes decreased dramatically and albeit resolved. He also began show continually improved mentation and cognitive function as well as improving language skills. Although he was not able to regain function at premorbid baseline,he continued to show good impulse control and lack of agitation during the rest of his 8-month long hospital course. Literature review & Discussion:A literature search was carried out on MEDLINE,Ovid as well as google scholar databases using different word combinations. No studies on the management of agitation or neuropsychiatric symptoms in a case of hypoglycaemic encephalopathy were found. Guidelines support the use of beta blocker, propranolol in particular, for agitation [3],questionable long term sequalae of Haloperidol use are reported,[4] while Risperidone use is reported with good effects[5] Use of antidepressants such as sertraline and citalopram has shown good results in patients with TBI.[6] Conclusion:Given the lack of serotonergic transmission post-brain injury,[7] SSRIs have a role in treatment of agitation that needs further resea

No. 129

Efficacy, Pharmacodynamics, and Correlated Neuroimaging Regarding Psychedelics: A Literature Review

Poster Presenter: Mustafa Kaghazwala, D.O.

SUMMARY:

Hallucinogens have a cultural basis among societies world wide due to their ability to allow the user to experience a reality not bounded by normal wakeful consciousness. These drugs were even used in clinical practice in the united states until their clinical significance was questioned which resulted in criminalization of use and consequent cessation of research. As our scientific understanding of the brain has advances, unfortunately there has not been a major therapeutic breakthrough treating depression, anxiety, and related mood disorders. Although there is limited data to draw on, this review will look at the comparative efficacy of mescaline, ketamine, LSD, psilocybin, Ayahuasca, and other psychedelics. This review will also explore the proposed effects of psychedelics on the serotonergic and glutaminergic systems; both of which are continually being researched to ameliorate symptoms of mood disorders . Lastly, clinical trials involving neuroimaging and concurrent psychedelic use will be reviewed in order to further understand the neuroplasticity and altered consciousness that the brain undertakes. Review of these studies will be used to discuss potential current treatment options not being utilized and implications for new pharmacological therapies.

No. 130

Neutrophil-Lymphocyte Ratio as an Inflammation Marker in a Case With Neuroleptic Malignant Syndrome

Poster Presenter: Nesrin Karamustafalioglu
Co-Authors: Tevfik Kalelioglu, Guler Celikel

SUMMARY:

Introduction: Neuroleptic malignant syndrome (NMS) is a rare and life-threatening side effect of antipsychotic treatment. The core symptoms of NMS are hyperthermia, rigidity, autonomic instability, and altered mental status after initiation of antipsychotic medication (1). In this case report we aimed to discuss the role of inflammation in NMS and usefulness of neutrophil to lymphocyte ratio (NLR) as

an inflammatory marker even in the absence of leukocytosis. Case: A 30-years-old woman with a 17 years history of bipolar affective disorder was transferred to acute care psychiatry service with acute exacerbation. She was treated with haloperidol 20 mg/day i.m, biperiden 10 mg/day i.m. On the 7th day of hospitalization the patient developed rigidity, tremor and incontinence without fever. Thus haloperidol was stopped for probability of NMS. 8th day of admission ECT was initiated. At 11th and 12th day of hospitalization, haloperidol i.m. was used for acute excitations. Rigidity, confusion, diaphoresis, tremor, tachycardia, and incontinence occurred at the following day. Her temperature was 36.3, heart rate was 110 per minute, respiratory rate was 15-20 per minute, blood pressure fluctuated between 90/70 and 110/70 mm/hg and oxygen saturation was 97%. Laboratory findings revealed increased levels of CPK(>2000 IU/L; normal range= 20-200), AST (188 U/L; normal range= 5-45), ALT (66 U/L, normal range= 5-40), LDH (581 IU/L; normal range=60-200), CRP (1.84 mg/dl; normal range= 0-0,5), erythrocyte sedimentation rate (ESR) (44 mm/hour; normal range= 0-20). Leukocyte count (6.35 103/µL; normal range= 4.1-11.2) was in normal range. At 19th day, confusional state developed and by the day of 20, bromocriptin 5mg/day was initiated with the diagnosis of NMS using the criteria of DSM-5. On the 29th day of admission, all symptoms of NMS disappeared. Antipsychotic treatment initiated with clozapine 12,5 mg/day because of excitation. The patient developed rigidity as cogwheel sign, dystonia, altered mental status, autonomic dysregulation after 6 days of clozapine initiation and interned to intensive care unit at 37th day of admission. After 6 day of hospitalization in intensive care unit, she was transferred back to psychiatry service. On 43th day, bromocriptine was increased up to 10 mg/day for presence of rigidity and dystonia. By the day of 57, no symptoms of NMS was observed. Discussion: In our case; NLR level was above 9 at the time of NMS diagnosis before initiation of NMS treatment. We did not observe fever and leukocytosis during hospitalization. Although leukocyte levels were in normal range, NLR levels were nearly as higher as a systemic infection level. In addition, the NMS development after starting clozapine showed a NLR level of >5 which is between the cut-off level of local infection levels (2). In our case we observed a relevance between NMS treatment and NLR levels. (shown in Table)

No. 131

Pareidolia in a Patient With Major Depressive Disorder: A Case Report

Poster Presenter: Olaniyi O. Olayinka, M.D., M.P.H.
Co-Authors: Olawale Ojo, M.D., Chiedozie Obinna Ojimba, M.D., M.P.H., Tolulope A. Olupona, M.D., Ayodeji Jolayemi, M.D.

SUMMARY:
Introduction: Pareidolia is defined as a type of complex visual illusion that involves the perception of ambiguous forms as meaningful objects. It is a peculiar, natural, function of the human brain that causes us to impose patterns on random collections of images or sounds. The ability to recognize faces is a function of the Fusiform Face Area (FFA) located in the fusiform gyrus of the temporal lobe of the human brain. Pareidolic illusions have been reported in Lewy Body Dementia and Parkinson disease but rarely in Major Depressive Disorder (MDD) as in the index case. MDD affects approximately 7% of the population and may be associated with perceptual disturbances (i.e., illusions and hallucinations). The presence of visual perception disturbances pose a treatment dilemma and often portend a worse outcome in mental disorders and neurocognitive disease. Case Summary: We describe the case of a 63-year-old Hispanic woman who presented to the emergency room for evaluation for a persistently depressed mood. She presented with an agitated and disorganized behavior as a result of seeing “the ugly looking” devil. She stated that the images were present while she was awake as well as in her dreams. She endorses perceptual disturbances of seeing the faces of evil spirits trying to talk to her and engage her. She had only minimal interactions with peers on the unit and showed a low drive and motivation and a downcast appearance. Patient has a past history of postpartum depression with a suicide attempt and a past medical history of pseudo-seizures. The patient was treated with Buspirone 10mg PO tid, with a favorable response in her mood and resolution of her illusions. Discussion: This case is an example of complex visual illusions in the context of a major depressive episode which resolved with the initiation of an antidepressant.

Consideration for temporal lobe seizure was made however numerous neurological examinations prior to presentation make the diagnosis of seizures very unlikely.

No. 132

Is the Kynurenine Pathway a Bridge Between Serotonergic and Glutamatergic Systems in the Schizoaffective Spectrum?

Poster Presenter: Paulo Marcelo Gondim Sales, M.D.
Co-Authors: Ezra Schrage, Richard Coico, Michele Tortora Pato, M.D.

SUMMARY:

Introduction: The Kynurenine Pathway (KP) is responsible for up to 95% of the tryptophan degradation in humans(1), and a recent meta-analysis suggests that both bipolar disorder and schizophrenia share differences on levels of KP metabolites when compared to healthy controls(2). Despite evidence suggesting the influence of neuroinflammatory pathways in the pathogenesis of schizoaffective spectrum disorders and biological evidence that cytokine levels directly influence levels of KP metabolites, only a limited number of studies investigated susceptibility genes involved in the dialogue between the KP and inflammation. Methods: A critical review was conducted on MEDLINE, EMBASE, Cochrane, and PsycINFO to identify genetic studies that investigated the kynurenine pathway in schizoaffective spectrum disorders. Results: In 2006, Aoyama et al published the first single-marker and haplotype analyses for 6-tag Single-Nucleotide Polymorphisms (SNP) of the Kynurenine Monooxygenase (KMO) in an association study with schizophrenia(3). However, despite evidence confirming the reduction of the KMO gene expression and KMO enzyme activity in a postmortem study of schizophrenia patients(4), the findings were not replicated using a second independent set of samples of Japanese ancestry(3). In 2009, investigating SNPs located in six genes in a predominantly Caucasian population, an increased odds ratio for the combined diagnosis of schizophrenia and bipolar disorder was found in carriers of the complex genotype HM74, which was observed in 30% of the cases(5). The authors proposed that this may derive from co-regulation of the kynurenine pathway by interacting genes or alterations in the metabolism of melanotropin receptor ligands through the KP metabolism. Also, during another genotypical investigation of 15 KMO SNPs in a predominantly Scandinavian population, no difference in the allele frequency between patients and healthy controls(6), similarly to what was found by Aoyama et al. The first genome-wide association study investigating KP metabolites was only published in 2016(7), in a study that found an association between elevated cerebrospinal fluid levels of kynurenic acid with positive psychotic symptoms and executive function deficits in bipolar disorder with a common variant within 1p21.3, which was lastly linked with reduced SNX7 expression. Table 1: outlines the common markers and different populations, reviewed by these core studies and show where their results supported and refuted each other. Discussion: Altogether, there is a paucity of studies that investigated the genetic determinants that regulate the cross-talk between KP and inflammation. Tryptophan catabolites might be responsible for driving neuroplastic changes through 5-HT and glutamate in schizoaffective spectrum disorders. Further studies are necessary to clarify the roles of kynurenine pathway susceptibility genes for the phenotypical manifestation of schizoaffective spectrum disorders.

No. 133

Periodic Catatonia Marked by Hypercortisolemia and Exacerbated by the Menses

Poster Presenter: Samantha Zwiebel, M.D., M.A.

SUMMARY:

Introduction: Since catatonia was first introduced by Kahlbaum in 1874, other psychiatrists including Kraepelin have observed patients with a periodic, recurrent catatonia. Gjessing, a Norwegian psychiatrist dedicated his life to study the biological abnormalities of patients with periodic catatonia. Leonhard, a German psychiatrist proposed that periodic catatonia was a specific subtype of familial schizophrenia. Case description: The grandmother (mother of her father) of this patient died in a psychiatric hospital probably due to a catatonic episode. At the time of admission to a long-term psychiatric unit in a state hospital, the patient was 40-year-old female who was followed for more than 4 years in which she had 4 episodes of catatonia that

were exacerbated by the menses. Results: On the first day that the senior author saw the patient with catatonic symptoms, he misdiagnosed her with overwhelming anxiety of unknown cause and treated her with oral lorazepam. During the catatonic episodes, she had elevations in serum creatine kinase (CK) and hypercortisolemia with pronounced leukocytosis. Her CK values peaked as high as 4,920 U/L during times of severe agitation and during the second catatonic episode that lasted 13 months, CK elevations were accompanied with elevations on the serum lactate dehydrogenase (LDH) up to 424 U/L. She had hypercortisolemia with late-afternoon values as high as 28.0 mcg/dL. Her white blood cell (WBC) counts went up to 24,200/mm3 accompanied by neutrophilia without any infection. Before coming to the state hospital she had 16 prior psychiatric admissions in private hospitals. The psychiatrists at these hospitals for the most part did not appear to be familiar with the diagnosis of catatonia but described elevations on WBC and LDH and an abnormal response to dexamethasone suppression test (DST) that normalized with electroconvulsive therapy (ECT). Discussion: We proposed that 1) the serum CK and LDH elevations reflect the severity of muscle damage incurred during her catatonic episodes, 2) her leukocytosis with neutrophilia was probably explained by demargination of neutrophils into active circulation by hypercorstisolemia, and 3) the hypercortisolemia may be compatible with the abundant literature of the relevance of fear in catatonia. This case is discussed in the context of a comprehensive review of the literature on 1) menstrual exacerbations of catatonia, 2) biological abnormalities on periodic catatonia and 3) familial periodic catatonia as a possible separated diagnostic entity. Conclusion: This patient exhibited a possible familial form of periodic catatonia that worsened when her menses and was accompanied with hypercortisolemia during the catatonic exacerbations.

No. 134
Encephalitis in Autism
Poster Presenter: Shweta Jain
Co-Author: Shahbaz A. Khan, M.D.

SUMMARY:

Autism was discovered in 1943 by Leo Kanner who believed it to be caused by the emotional unavailability of the child's mother. There is a growing body of literature that demonstrates an inflammatory etiology of autism. Evidence of inflammation in autism spectrum disorder (ASD) includes microglial activation and elevated anti-NMDA receptor antibodies, particularly in regressive autism. There is research suggesting that up to 69% of ASD patients have microglial activation and neuroinflammation. Variation in the pathogenesis of autism with both neuroinflammatory and psychosocial models calls for the use of differentiated therapy such as intravenous immunoglobulins and steroids in the former, and conventional symptomatic treatment for the latter. The objective of this translational literature review is to create a decision tree that incorporates the neuroinflammatory model and illustrates a more differentiated workup and management to mitigate ASD symptoms in certain patients.

No. 135
Exercise in Psychiatry Schizophrenia: Effect of Exercise on Negative and Cognitive Symptoms
Poster Presenter: Zeshawn Ali, D.O.
Co-Author: Rashi Aggarwal, M.D.

SUMMARY:
Often medications target the positive symptoms of schizophrenia but have very little effects on the negative symptoms as demonstrated by current literature. Exercise is an inexpensive treatment method that is not fully harnessed in the treatment of patients in private and organized settings. We will review how the benefits of exercise can apply to improving the negative symptoms and quality of life in patients with schizophrenia by reviewing evidence for effect on contributing conditions (depression and anxiety) and its direct impact on cognition and negative symptoms. Method: Literature review was done on PubMed and Google search by using the keywords "exercise", "schizophrenia", "depression", "anxiety", "cognition", "brain." Results: Numerous articles were reviewed for the purposes of this literature review. 8 studies were reviewed in detail with respect to to aerobic exercise and positive impact on cognition and brain plasticity in general. In schizophrenic patients (atrophy demonstrated in

areas of the brain) one study in particular demonstrated plasticity in the hippocampus of schizophrenic patients with increase in size and some associated functional relevance in cognitive domains. With respect to anxiety and depression the studies to be referenced are 4. The main study with respect to depression is an extensive meta-analysis published in 2016 that demonstrates a large antidepressant effect (aerobic exercise), when compared to controls, establishing it as a clear evidence based treatment for depression. The studies of interest with respect to anxiety show significant effect of mild to moderate exercise on anxiety likely via exposure therapy (mimicking physiological state), affecting negative memory, and building self efficacy. 10 studies were were reviewed in detail demonstrating evidence that aerobic exercise improved performance in cognitive domains in schizophrenics along with improvement in global functioning and depression in one meta-analysis. Overall there was significant improvement noted in domains such as negative symptoms, social cognition, working memory, attention, and processing speed. Discussion :The evidence for aerobic exercise improving negative symptoms in schizophrenia is fairly solid. There is heterogeneity in some studies with respect to what the exercise entails. Interestingly so, as noted in some, the complexity of the exercise can open new doors in treatment settings with respect to treating negative symptoms, encouraging complex social interaction and identity formation. Studies are already present with respect to schizophrenia showing impairments in object affordance and sensory integration, everything that more complex exercise can help with. Studies that are more specific in the types of exercise and take into account cognitive theories should be undertaken to further elucidate the effect this can have. This can perhaps give rise to clear specific evidence which fuels funding for more integrative programs.

No. 136

Metabolic Disturbances and Psychosis Case Report: Hypercapnia Secondary to Tracheal Stenosis Exacerbating Psychosis

Poster Presenter: Zeshawn Ali, D.O.
Co-Authors: Juvaria Anjum, Ghulam Sajjad Khan, M.B.B.S., Najeeb U. Hussain, M.D.

SUMMARY:
A 57-year-old female patient with a past history of paranoid schizophrenia and asthma presented with disorganized behavior, auditory hallucinations and was internally preoccupied and superficially cooperative. Physical examination was significant for stridor (inspiratory and expiratory) and scar tissue on the anterior aspect of the neck secondary to tracheotomy. The underlying story behind the tracheotomy was unclear (given patient's disorganization). Patient's lab, oxygen saturation was within normal range, she was medically cleared, and it was assumed that stridors were due to the scar tissue. Aripiprazole was started but the patient was noted to be more psychotic, paranoid, disorganized and withdrawn. Hence it was crosstitrated with Olanzapine. Depakote and Gabapentin were also added. Patient's affect, mood and judgment improved. However, psychotic symptoms seemed to remain stable. While on the Psychiatric inpatient unit, stridor persisted and worsened;eventually she had wheezing and troubled breathing (with drop in O2 saturation)for which she was started on nebulizer treatments (had been seen by medicine). Despite adequate consultation and care she collapsed on the unit and was transferred to medicine and subsequently the surgical unit secondary to hypercapnic respiratory failure and treated for her respiratory acidosis. She became stable but could not speak (tracheotomy) and expressed herself in writing. She was on same medications and dosages of antipsychotics. The patient was far more linear in her writing (had written before in a very disorganized fashion) and denied auditory and visual hallucinations, stating she felt better in that aspect specifically, while writing she no longer saw the shadows or heard voices for the first time in her nearly month stay. This was just a week removed from her inpatient psychiatric stay, and complicated medical hospitalization. In this poster, we demonstrate how metabolic conditions like "subclinical" respiratory acidosis affect the central nervous system and potentially exacerbate psychiatric conditions despite not being evident in the classical sense, and how this can potentially confound treatment of a patient.

No. 137

"Doctor, Is My Brain Wired With Excess Copper?": A Case of Neuropsychiatric Symptoms in Untreated Chronic Idiopathic Copper Toxicity

Poster Presenter: Merry Mengyuan Huang
Co-Author: Ozra Eslampanah Nobari, M.D.

SUMMARY:
Introduction: Copper is a highly reactive metallic ion [1]. The highest concentrations of copper in the human body is located in the liver and brain [2]. Copper is an important cofactor for enzymes involved in neurotransmitter synthesis and collagen production. However, its excess causes oxidative damage and tissue deposition leads to global organ impairment [3]. Copper excess is commonly recognized interchangeably as Wilson's disease, however, isolated chronic copper toxicity can be an organic cause to psychiatric disturbances. Case: The patient is a morbidly obese wheelchair-bound 43 years old Caucasian female with dysphonia in the form of distinct child-like intonation and a complex medical and psychiatric history. She presented to the Emergency Department (ED) by police due to Suicidal Ideation (SI) and behavioral disturbances and considering the patient's extensive history of over 33 psychiatric hospitalizations, she was admitted to inpatient care. During the course of her hospitalization, the patient was initially agitated and combative. After minor medication adjustment, her mood improved and anger outbursts decreased, however, her long-standing passive SI remained unchanged. Clozapine and lithium were not tried to target her suicidality due to past failed trials [4]. Patient's hospitalization prolonged due to complicated post discharge placement, which allowed the primary team to revisit the diagnosis and investigate the underlying cause of her clinical presentation. Her past medical history was significant for a wide range of diagnoses including osteoarthritis, seizure disorder, Obstructive Sleep Apnea, recurrent Deep Vein Thrombosis, chronic pain, dermatitis, nonspecific thyroid disorder, anemia, endometriosis, numerous gastrointestinal problems, and status post bariatric surgery with multiple revisions. Chart review for psychiatric history revealed the diagnosis of developmental delay and intellectual disability at a young age as well as series of emotional, physical, and sexual abuses. Patient experienced a new onset of seizures, migraines, and hallucinations at her 20s and was placed on SSDI for her disabilities. The rest of the psychiatric history was inconsistent and puzzling. In this poster, we present a case of a 43 years old female with significant medical and psychiatric history. We explore the role of idiopathic copper toxicity at explaining this patient's diverse clinical symptoms. Discussion: Micronutrients imbalance cause psychiatric disturbances. Chronic idiopathic copper toxicity is suggested to be considered as an organic cause of unexplainable neuropsychiatric symptoms especially in the setting of other seemingly unrelated medical problems. Medications used to treat excess copper is extremely inexpensive compared to the costs of inpatient hospitalizations. We suggest that detection of copper toxicity and early intervention can improve patient care outcomes.

No. 138

"How Many Warning Signs Did I Miss to End Up in the Psychiatric Unit, Doctor!": The Mysterious Case of Trauma Related Catatonia

Poster Presenter: Ozra Eslampanah Nobari, M.D.

SUMMARY:
Case Report: A 40-year-old female with a psychiatric history for multiple episodes of untreated depression was brought to the emergency department by her friend for incoherent speech, isolative and odd behaviors and passive suicidal statements in the past year which had intensified in the last two months. Reportedly, the patient was not able to care for self and was found the day prior to admission wandering in her neighborhood, walking in circles. The friend explained that the patient was highly educated and successful professional for years. At the time of admission, she appeared to be anxious and oriented to place and person only. Her speech was incoherent, tangential and pseudo-philosophical in nature. She was unable to answer basic questions regarding her emotions, seemed to be paranoid, demonstrated odd movements and appeared to be responding to internal stimuli. Her vitals also were suggestive of dysautonomia. Patient's medical history was only significant for recent primary care physician visits over the past few months due to worsening abdominal discomfort and fever, without any etiology identified. Upon

admission, a full medical workup, including first episode psychosis work up and OB-GYN and neurology consults were unrevealing. Formal assessment of catatonia revealed grimacing, mannerisms, rigidity, negativism, withdrawal, impulsivity, mutism and Mitgehen (with a score of 20 on the Bush-Francis rating scale). Benzodiazepine challenge test improved the patient's symptoms. She was initially diagnosed with Major Depressive Disorder (MDD) with psychotic features and catatonia. She responded well to benzodiazepine treatment. During hospitalization and as the patient started to improve, she was able to report the loss of a close relative two months prior to admission. Her daily conversation with the team was remarkable for symbolism and religious meaning in life which in combination with catatonia symptoms were indicative of her progress. When the symptoms of acute catatonia improved, the team discussed starting antipsychotic medications. She consistently declined medications to treat her mental illness because taking medications was contradictory to her belief system including the primacy of therapy. However, after she finally agreed to try antipsychotic medications, optimal improvement observed. Later in hospitalization, the etiology of her catatonia and mood symptoms was not fully understood. A psychology consult revealed the history of trauma following depressive episodes, highlighting an unreported suicidal attempt which was not fully executed due to the patient's decreased cognitive function. The patient explained the incident of trauma which took place two years ago and the amnesia to the events around the time of incident due to the head injury. She acknowledged that her mental condition declined severely and steadily right after the incident. She was discharged with the additional diagnosis of Post Traumatic Stress Disorder on ari

No. 139

A Case of Visual Hallucinations Following Basal Ganglia Stroke

Poster Presenter: Saad Ahmed, M.D.
Co-Authors: Shahed Hossain, Ayodeji Jolayemi, M.D.

SUMMARY:

Introduction: The etiology of visual hallucinations in elderly usually involves lesions to subcortical structures,including basal ganglia, as can be seen in Lewy body dementia.These basal ganglia lesions are degenerative in nature. We report a case,where the patient presented with similar to presentation of Lewy body dementia. However, clinical presentation along with radiological studies suggested that visual hallucinations in this patient might have been a result of basal ganglia stroke. Case Summary: We present a case of an elderly male who was brought to the psychiatric ER for visual hallucinations and no obvious cause and was initially suspected for Lewy Body Dementia.However,the absence of key criteria evidenced by the patient's generally intact cognition and motor system in conjunction with his favorable response to antipsychotics largely preclude its likelihood.Suspect diagnosis also sharing features with patient's presentation include peduncular hallucinosis,seizure activity and Charles Bonnet Syndrome but the patient's timing of his experiences unrelated to sleep wake cycles,imaging studies not implicating the thalamus,midbrain and brainstem,that he displayed no other characteristic features of seizures including lack of altered sensorium or postictal elements and that he was not visually impaired render them unlikely.Charles Bonnet Syndrome was further challenged by the patient's fearful emotion demonstrating lack of insight and preserved visual integrity,despite the history of cataracts and glaucoma.Patient ambulated without visual aid and his neural circuitry was therefore not deprived of the visual input which could have then otherwise incited inhibitory release thereby sparking hallucinations.Another diagnosis of interest was inspired by the patient's past medical history of HTN and DM,mild cognitive decline and supporting MMSE/MoCA scores which are suggestive of psychosis secondary to vascular dementia.It is especially a viable candidate in light of its status as the second most common cause of neurocognitive decline,after Alzheimer's disease. His intact motor functioning,gait and his preserved urinary continence however once again suggests alternative explanations.The most conspicuous element inspiring deeper investigations was a lacunar infarct seen on brain MRI which the literature revealed to be a known and rare cause of psychosis and hallucinations.The phenomenon is partially explained by the interplay between prefrontal cortex and subcortical structures though

reports have also surfaced detailing hallucinations post lesions in a wide variety of neuroanatomical structures. Conclusion: Further studies to consider include a clarification as to what agents may promote perceptual disturbances in stroke patients versus agents that disrupt said factor as well as the anticipated onset of psychosis post CVA. Long term surveillance of treated patient may also be of utility.

No. 140

"Shaky Pain": A Case of Beta Blocker Non Responsive Akathisia

Poster Presenter: Saad Ahmed, M.D.
Co-Authors: Olaniyi O. Olayinka, M.D., M.P.H., Tolulope A. Olupona, M.D., Ayodeji Jolayemi, M.D.

SUMMARY:
Introduction: Akathisia is the one of the most common forms of Extrapyramidal Symptoms (EPS) resulting from the use of neuroleptics. It usually presents as motor restlessness with a compelling urge to move and an inability to sit still. When akathisia is present, our first intervention is a cautious reduction in antipsychotic dose, if feasible, with close monitoring of the patient for exacerbation of psychotic symptoms. If decreasing the antipsychotic drug dose is not feasible or inadequate, medication treatment is suggested. One of the most commonly prescribed medication used for treatment for neuroleptic induced akathisia is beta-blocker, most commonly Propranolol. Case summary: Here we report a case akathisia in a middle-aged female with Schizophrenia who failed to respond to beta blocker. Patient received Propranolol in the past without any improvement of her symptoms, rather her symptoms worsened. Patient continued to exhibit symptoms of akathisia and complained of "shaky pain". Benztropine was introduced to the regimen at a low dose, up-titration of Benztropine initially seemed to help with the symptom of akathisia, but patient continued to complaint of "shaky pain", which was observed to be related to anxiety associated with akathisia. Subsequently Clonazepam was introduced with expectation of reducing anxiety related to akathisia, but symptoms did not subside and was subsequently discontinued. Trihexphenydyl was introduced which provided symptomatic relief and proved to be most effective of the medications attempted to date for this patient. Discussion: Although akathisia is one of the most common EPS presentations, its management beyond beta blockers remain unclear. This case examines the possibility of using a commonly overlooked medication in treatment of akathisia. Conclusion: As side effects are the most common causes of noncompliance with medications and therefore relapse, management of side effects need to be robust. This is especially true for side effects with poorly understood pathophysiology which can complicate treatment choices. In cases where conventional treatment fails to provide adequate response, trial of less commonly used medications may provide better response. Further studies are encouraged to focus on currently available pharmacotherapeutic agents that could possibly be used to treatment and prevention of side effects.

No. 141

Ulysses Syndrome: Immigrant Syndrome of Chronic and Multiple Stress

Poster Presenter: Gonçalo Sobreira
Co-Authors: Cátia Alves Moreira, João Oliveira

SUMMARY:
Introduction The eponym Ulysses Syndrome, coined by Spanish Psychiatrist Joséba Achotegui, was first used in 2002 to describe a condition afflicting migrants(1). These populations, who might have already experienced enormous stressor levels (often near lethal migratory journeys), are then later exposed to adaptation stressors like different languages, isolation, lack of work opportunities, diminished social status or a sense of failure and are thus at risk of developing this syndrome, a severe psychosomatic disorder leading to Adjustment Disorders(2). Methods Case report and narrative literature review of the PubMed database about Immigrant Syndrome. Case report The authors report the case of a 33-year-old, Sub-Saharan African Woman, residing in a Portuguese refugee centre since 2015. The patient came to Portugal searching for refugee status due to political conflicts in her home country. She was first electively admitted in June 2016 to an Interventional Neuroradiology Unit for treatment of multiple aneurisms, found after third cranial pair paresis investigation. The intervention resulted in retroperitoneal hematoma,

hypovolemic shock and parietal-occipital stroke. During the next two months, she had multiple ER visits due to orbitofrontal headaches. However, after careful evaluation organic causality was discarded and she was then referred, in late December, to psychiatric treatment at a Refugee Treatment Group due to Adjustment Disorder with Depressive Symptoms (DSM5 – ICD10 F43.21). Nevertheless, she was then voluntarily admitted (March 2017) to a Psychiatric Unit, after referral by her case manager to the ER due to depressive mood, irritability, aggressive behaviour, disorganised speech, persecutory delusions, and inversion of sleep pattern, with the diagnostic hypothesis of Psychotic Disorder due to another medical condition with delusions (DSM 5 – ICD10 F06.2). During her admission, she was evaluated by Liaison Neurology and Internal Medicine and organic causality was again discarded. Several symptoms of the PTSD spectrum were present but full criteria were not met (no criterion C) and the previously considered delusional thoughts were later evaluated by transcultural psychiatry and deemed adequate considering her cultural background. She attained provisional response after 37 days (HAMILTON scores improvement from 7 to 1) and was discharged after 44 days with the diagnosis of Depressive episode with insufficient features (DSM5 ICD10 – F32.8). Conclusion Even though Ulysses Syndrome is not a consensual entity the stressors faced by migrant population in their welcoming countries might lead to the development of Adjustment Disorders which might result in severe functional loss. Strategies should be put in place in order to improve mental health and quality of life of these populations.

No. 142
WITHDRAWN

No. 143
WITHDRAWN

No. 144
Sociodemographic Characterization and Analysis of Clinical Effectiveness of Utilizing rTMS for Refractory Depression at a Military Treatment Facility
Poster Presenter: Michael Sieun Yang, D.O.

SUMMARY:
Background: The mechanism of action for the efficacy of TMS is still debated but stimulation of neurogenesis via BDNF production is a popular theory. This study evaluated whether rTMS treatments resulted in a measurable and statistically significant improvement in depression symptoms for treated military beneficiaries in Hawaii suffering from depression. It also examined rTMS utilization rates by branch of service, active duty status, and other demographic factors. **Objective:** This study seeks to evaluate whether rTMS treatments resulted in a measurable and statistically significant improvement in depression symptoms for treated military beneficiaries in Hawaii suffering from depression. It also examines rTMS utilization rates by branch of service, active duty status, and other demographic factors. **Methods:** A retrospective chart review of 77 rTMS patients who received and completed treatment between January 1, 2010 and October 31, 2016 was performed. Under a typical treatment regime, patients receive rTMS for six weeks, totaling 31 treatments, as well as weekly psychiatric assessments, which included completion of Beck's Depression Inventory (BDI) and Posttraumatic Stress Disorder Checklist (PCL). Data extracted included patient gender, race and ethnicity, age, status and branch of service if applicable, primary and secondary diagnosis, history of antidepressant treatment to include number of medications prescribed and length of time taken, and pretreatment and post-treatment testing scores for BDI and PCL. A mixed model repeated measures analysis was done assuming an autoregressive order one covariance structure to evaluate changes over time. Adjusted analyses were done to assess whether changes over time differed by age, prior diagnosis of PTSD, active duty status, and gender. **Results:** The majority of patients were from the Army (74%) and 56% were active duty servicemembers. Just over half (53%) were male. BDI and PCL scores were significantly lower at end of treatment on average compared to the pretreatment baseline scores. Mean differences for BDI and PCL were significant with $p<0.001$ at 1–15, 16–30, and 31–45 days after TMS treatment was initiated. Overall, 44% of patients experienced a reduction of 10 points or more on BDI, and 38%

experienced a reduction of 10 points or more on PCL. **Conclusion:** Our research found that rTMS treatments produced a significant reduction in symptoms of depression and PTSD in patients at this treatment facility. Broader implementation of this treatment modality may prove beneficial for the purposes of military readiness, given current policies and restrictions on servicemembers who are initiated on antidepressant medications. These results may also provide further support for the use of rTMS to treat non-depressive disorders such as PTSD and bipolar disorder.

No. 145

ADHD and TMS: Efficacy and the Emergence of Biomarkers; a Review

Poster Presenter: Pranav Milind Jagtap, M.D.

SUMMARY:

Introduction: ADHD is characterized by inattention, impulsivity, and hyperactivity. These symptoms are present in a variety of psychiatric illnesses such as bipolar disorder, Tourette's and tic disorders, anxiety, psychosis, substance use, and more; but because evaluations are subjective, the condition can be misdiagnosed and consequently mistreated. Daily TMS of the left prefrontal cortex (PFC) is FDA approved for treatment resistant depression and its mechanism of action is hypothesized to alter dysfunctional neuro-circuitry. However, the utility of this novel therapy in other psychiatric disorders remains to be determined. Since most psychiatric disorders are characterized by cognitive executive dysfunction, we took a closer look at TMS and its effects on attention deficits. Methods: Pubmed was surveyed for literature using the terms: ("Attention Deficit Disorder with Hyperactivity"[Mesh]) AND ("Transcranial Magnetic Stimulation"[Mesh] OR transcranial magnetic stimulation); filters were: 10 years, Humans, English. The results were further manually sorted by both authors to identify literature reviews, meta-analyses, and randomized/sham controlled trials (RCTs) pertaining to ADHD. Findings from these studies were summarized to provide a broad overview of the current applications of TMS for ADHD. Results: The initial search results returned 119 entries matching the query; and of these four were RCTs, 27 were literature reviews, and there were two meta-analyses. One cross-over double blind RCT (3) demonstrated improvements in attention immediately following high frequency rTMS to right dorsolateral PFC. Wu et al (8) delivered a proof-of-concept for fMRI navigated rTMS by stimulating the supplemental motor area to elicit hemodynamic changes in the motor cortex. Two RCTs (1,4) corroborated reliable changes in the TMS evoked potential N100, as a marker of motor cortical inhibition and correlated it clinically with symptomatic improvement. Several trials also favored the utility of short interval intra-cortical inhibition (SICI) as a biomarker for inhibitory cortical circuitry in ADHD and related disorders. Conclusion: These findings provide encouragement for the community as we inch closer towards the era of precision psychiatry (2). TMS can be applied focally to improve attention deficits by reconfiguring activity in dysfunctional networks; and given that PFC connectivity within attention networks is sensitive to the slightest of changes in stimuli (5), it is unsurprising to see even a single session of rTMS induce clinical improvement. SICI and TMS-N100 potential were replicated in various studies to substantiate clinical utility as objective proxies for hyperactivity and motor cortical inhibition in ADHD and related conditions. The relatively side-effect free profile of TMS is an attractive feature while patients will likely appreciate generalizable cognitive benefits across many domains and co-morbid afflictions (6,7).

No. 146

Is ECT + Ketamine 1/∝ Catatonia?

Poster Presenter: Raissa Elaine Lavin Tanqueco, M.D.
Co-Author: Gretchenjan Lactao

SUMMARY:

Ketamine has been hailed as the must try medication in treatment resistant depression. There is limited literature regarding ECT with use of ketamine as anesthesia for catatonia (most recent was Z Litvan, 2017 in a case of depression and dementia in a geriatric patient). In this poster, we explore a case of a much younger patient and review the highs, lows, and lessons learned. Mr. K is a single, domiciled, unemployed young adult Asian male with past psychiatric history of major depressive disorder with psychotic features, poor adherence to treatment, and was brought in to the

emergency department by family members due to concerns of Mr. K's refusal to eat for several days. On exam he appeared to be catatonic, with prominent features of negativism, mutism, and posturing. Mr. K's lack of engagement, poor self care, and failure to thrive progressed during hospitalization and resulted in >30 lb weight loss in two months. He intermittently accepted lorazepam and fluoxetine. Curiously, Mr. K eventually signed to voluntarily receive ECT. However, no notable improvement was evident after multiple rounds of ECT. A trial of ketamine as anesthetic was used for subsequent ECT treatments. Upon returning to the unit following the first dose of ketamine received during ECT, Mr. K appeared to be more cooperative with care, nutrition, and medications. Ketamine was used for an additional four times during ECT. Mr. K progressed to be more motivated, less isolative, no longer requiring prompting with meals or medications, joining group therapies, responding appropriately to questions, and speaking spontaneously at times. After nearly three months in the hospital, Mr. K requested to be discharged home. His family felt comfortable with this plan, and he was scheduled to continue ECT twice a week on an outpatient basis with outpatient psychiatric follow-up. How do you think our protagonist fared?

No. 147

Response to Preexisting Paruresis Along With Major Depression and Generalized Anxiety Disorder Treated With Electroconvulsive Therapy (ECT)

Poster Presenter: Rassam Khan, M.D.
Co-Author: Ye-Ming J. Sun, M.D.

SUMMARY:
Background/objective: Paruresis manifests in a fear and inability to urinate in public restrooms when other persons are present. Paruresis can create significant social, interpersonal, and occupational distress. Individuals with paruresis are at noted risk for both major depressive disorder and generalized anxiety disorder. About 50% of individuals with paruresis have at least one other comorbid diagnosis. From most to least common, comorbid diagnoses include social anxiety disorder, major depressive disorder, alcohol use disorder, and obsessive-compulsive disorder. Case Report: A 24-year-old Egyptian American male, single, unemployed, living with parents complains of "I can't urinate when I am away from home and even at home when I hear foot steps". Patient has the history of paruresis since age 8. However, in the past several months the patient has worsened. He has poor self-esteem, troubled sleeping, feeling helpless and hopeless. He has passive suicidal ideation but no active suicidal or homicidal ideations. He also reported excessive anxiety and worrying over many things not necessary for many years. These symptoms have worsened to the point they are interfering with his social and professional activities. Patient has exhausted all his options from therapy to different cocktails of medications; none seemed to improve his symptoms. Patient uses alcohol and cannabis occasionally. There is no known family history of psychiatric illness. At the time of initial evaluation patient was already on Clonazepam 1mg q12 hr, risperidol 0.25mg bid, venlaxfaxine 75mg daily, hydroxyzine 50mg bid. After ECT, patient stated he is now able to initiate urination when not at home. Also noticed improvement in symptoms of depression and anxiety. Method/Results: ECT was administered with a MECTA Spectrum 5000Q unit. Average seizure length was 42.2 seconds measured by EMG and 70.1 seconds measured by EEG. The patient was followed with Hamilton Depression rating scale (HAM-D), Yale Brown Obsessive Compulsive Scale (YB-OCS), and Social Phobia Inventory (SPIN), and Beck's Anxiety. The baseline scores consisted of HAM-D score 20, SPIN 48 (severe), Beck's 29 (moderate), YB-OCS 38 (severe), MMSE 30/30. After ECT there was improvement with the following scores of 11, 28, 18, 23, 30/30 respectively. Discussion: Treatments currently available to patients suffering from paruresis are limited (Soifer, Zgourides, Pickering, 2001). While cognitive behavioral therapy shows consistent efficacy in managing symptoms of paruresis (Soifer&Walsh, 2008). Pharmacological intervention has generally proven "disappointing" in the treatment of paruresis (Bohn and Sternbech, 1997). Our hope is that this report will add further discussion about the possible usage of ECT in similar cases where paruresis with comorbid diagnosis of major depression and anxiety can show improvement in the patient's symptoms overall.

No. 148

A Case of Periorbital Erythematous Plaques Possibly Induced by Electroconvulsive Therapy

Poster Presenter: Sarita Sharma, M.D.
Co-Authors: Vinod N. Alluri, M.D., Nana K. Cudjoe, M.D., Maggie Armstrong

SUMMARY:
Background: Psychiatrists use electroconvulsive therapy (ECT) to treat a variety of psychiatric conditions. Contrary to popular belief, ECT is safe (Tess and Smetana, 2009). ECT has several well-known, though often benign side effects, which notably do not include rash (Tess and Smetana, 2009). The most common somatic complaints of ECT are headache, disorientation and memory deficits. Side effects do not change early or late in the ECT course and are not influenced by ECT electrode placement or dosage (Devanand, et al., 1995). Clinicians may have difficulty finding the etiology for adverse dermatologic reactions to ECT, and though such reactions are infrequent, they can be quite distressing for patients. There is little, if any, literature to date that demonstrates adverse dermatologic reactions directly related to ECT (Gomez, 1975). Case Presentation: A 55-year-old woman presented for inpatient ECT following the recommendation of her psychiatrist for treatment of severe, recurrent major depression without psychotic features. After medical clearance, the patient underwent her first bilateral ECT treatment. The next day, the patient developed new bilateral, periorbital erythematous plaques which were neither painful nor pruritic. She denied the use of new soaps or lotions and denied self-injury; antinuclear antibody (ANA) and Erythrocyte Sedimentation Rate (ESR) were within normal limits. Three days following treatment, her rash appeared to be resolving and the decision to continue with a second ECT treatment was made. For the next several treatments, her rash would wax and wane with the timing of ECT; her bilateral, periorbital plaques would flare in intensity within 24 hours following ECT and diminish between treatments, though never fully resolving. After discontinuing the use of all soaps and lotions, intramuscular diphenhydramine, topical hydrocortisone 1%, and changing sedative medications from Methohexital to Propofol failed to affect the dermatologic course, the decision was made to change from bilateral to unilateral ECT. Following right-sided unilateral ECT treatment, the right-sided unilateral, periorbital erythematous plaques flared while the left-sided periorbital rash resolved. Conclusion: Possible etiologies of the patient's dermatologic condition included new soaps and lotions, which the patient denied, and medication reaction, including anesthesia, which would typically present as a diffuse reaction. The patient's localized, relapsing and remitting rash seems unlikely to have resulted from a new topical treatment or medication We hypothesize that the ECT treatment itself is what precipitated the unique rash-like presentation in the patient. A possible explanation includes an underlying dermatologic condition that was previously unknown to the patient and exacerbated by the electrical current. This dermatologic reaction may be a result of ECT and could be distressing to patients, though such reaction would be both rare and benign.

No. 149

The Effectiveness of Combined Etomidate and Ketamine in Electroconvulsive Therapy (ECT) for Optimal Treatment in Major Depressive Disorder

Poster Presenter: Tolu Oyetunde
Co-Authors: Rassam Khan, M.D., Ye-Ming J. Sun, M.D.

SUMMARY:
Background: The effectiveness of an Electroconvulsive therapy (ECT) session is determined by a multitude of factors, one of which is seizure quality and duration. Our aim is to compare the duration of seizures using different anesthetics. An optimal seizure duration lasts about one minute. Our aim was to determine whether etomidate and ketamine combination would produce longer seizure duration. In addition ketamine alone has been used effectively treating Major Depressive Disorder. Thus, the combination of etomidate and ketamine would boost the effectiveness in ECT treating treatment-resistant Depression. Case: Mr. L is a 55 year-old Caucasian male, with a psychiatric history of Major depressive disorder severe w/o psychotic features and generalized anxiety disorder. He was on sertraline 200mg, quetiapine 200mg Qhs and vistaril 100mg tid. These medications were not helping his symptoms and he continued to present with flat

affect, poor sleep, anhedonia, helplessness, hopelessness and suicidal ideation without plan. No homicidal ideations or hallucinations. He has a previous history of alcohol abuse but quit 2 years ago. Initially his mini mental status exam was 30/30 and Ham-D was 21. Due to treatment-resistant depression, he was started on ECT treatment. Method/Results: ECT was administered with a MECTA Spectrum 5000Q unit (MECTA Corporation, Portland, Oregon). Standard unilateral-right electrode placement was used, with seizure activity monitored. Patient was started with methohexital (140mg) and seizure duration was inadequate even with 500mC maximum charge. Then the patient was given ketamine (70mg) and methohexital (70mg) with a mean charge delivered at 499.9mC in which his seizure lasted 23 seconds by EMG and 25 seconds by EEG. In order to produce more effective seizure duration, the patient was given Etomidate (15mg) and Ketamine (70 mg). For this treatment first mean charge delivered 224.5mC and subsequent stimulation was 325.1 mC. The first mean charge produced seizure duration of 19 seconds measured by EMG and 29 seconds measured by EEG. Subsequent stimulation measured 25 seconds by EMG and 44 Seconds by EEG. Succinylcholine i.v. was used for muscle relaxation. Conclusion: Our results indicate that the combination of etomidate and ketamine is the best combination than ketamine and methohexital or methohexital alone in optimizing seizure duration as well as depression improvement.

No. 150

Clozapine and Aripiprazole for Borderline Personality Disorder With Multiple Suicide Attempts: A Case Report

Poster Presenter: Felix Oscar Priamo Matos, M.D.
Co-Authors: Darmant Bhullar, M.D., Panagiota Korenis, M.D., Daniel Romulus Roman, M.D.

SUMMARY:
Borderline personality disorder (BPD) is a pervasive pattern of instability of interpersonal relationships, self-image and affects, with marked impulsivity, beginning by early adulthood and present in a variety of contexts (1). Pharmacotherapy with antipsychotics, antidepressants and mood stabilizers has been used to control brief psychotic episodes, depressed and labile mood, and impulsivity (2). This is a 34 year-old female with a psychiatric history of BPD, schizoaffective disorder, post-traumatic stress disorder, multiple hospitalizations and suicide attempts, and multiple episodes of sexual abuse, with a medical history of seizure disorder, polycystic ovary syndrome, hypothyroidism, asthma, obstructive sleep apnea and obesity who was admitted to the inpatient psychiatric unit due to suicidal ideation and command auditory hallucinations. During the initial evaluation, Ms. K reported command auditory hallucinations of unrecognizable voices of both genders encouraging self-injurious behavior. The patient also reported passive suicidal ideation without a plan and vivid dreams about the previous episodes of sexual abuse. She was successfully treated with Clozapine titrated to 600 mg oral (200 every morning, 400 at bedtime), Aripiprazole Maintena 400 mg intramuscularly monthly, Sertraline titrated to 100 mg oral daily, Prazosin 5 mg oral at bedtime, and Oxcarbazepine 900 mg every morning and at bedtime for a period of sixty one days. During the inpatient course, she constantly reported suicidal ideation with a plan of slashing her wrists and jumping from a chair, and responded to command auditory hallucinations encouraging her to bang her head against the wall, leading to multiple restraints and seclusions. This behavior led to the patient being placed on constant visual observation and receiving multiple intramuscular injections, and as needed medications to control the above self-injurious behaviors. A significant and sudden improvement was noticed in self-injurious behavior and psychotic symptoms with the above regimen during the last week of hospitalization, in contrast to previous case reports where the patients improved clinically within 2 weeks, on average, with 400 mg or less of clozapine, without receiving other antipsychotics or augmentation with Oxcarbazepine (3). More importantly, the delayed response to therapy could be due to her multiple medical comorbidities, as well as psychiatric history of schizoaffective disorder and post-traumatic stress disorder could explain the difference in her hospital course compared to other BPD patients.

No. 151

Tintin, the Secret Identity: A Study Behind Tintin's Personality Traits

Poster Presenter: Jaime Valero
Co-Author: Juan Cano, M.D., M.Sc.

SUMMARY:
Personality has been defined from different perspectives, a variety of scales has been used in order to measure the numerous personality traits. Scales that gave little guidance with poor concept-name relation with some of these traits and also that varies according to each assessor's scale interpretation. In order to fight against this problematic, an integration of concepts with the introduction of a descriptive model in personality psychology was the solution to it. An extenuating researched that involved along the years several variables in order to determine five dimensions had to be made to structure the taxonomy in human personality. These variables rated from people with no more than high school education to first year graduate students, ratings by peers, supervisors, teachers, or experienced clinicians in diverse settings. The analyses, made at the time by Tupes and Christal found five strong and recurrent factors between descriptions. This five-factor structure was later replicated by Norman, Borgatta (1963), Goldberg in the 1981 named them "Big five" to emphasize the amplitude of each factor (1). The Adventures of Tintin (Les Aventures de Tintin) a series of 24 comic albums that were created by a Belgian cartoonist George Remi who wrote under the pseudonym of Herg'. He created a personage that became one of the most popular European comic characters of the 20th century. It is developed during a pretty realistic era. It was written in more than 70 languages around the world, with sold over to 200 million copies. This case is then a study of Tintin's personality traits, a man in his early twenties. Tintin is a clever journalist and adventurer/pilot. Also, a man with a particular endurance who has survived collisions and crashes, capable of fight to bring two men by himself, fight corruption without too much effort. He has excellent people skills and speaks a bunch of languages which is very helpful in connect to different humans, let`s not forget that he also loves animals, for example his loyal partner Snowy ("Milou" in French). So, we have a person who has a very good reputation if we ask captain Haddock (his adventure companion), and has no bad habits and apparently is one of the best humans in the comic world. However, to the question how can such a wonderful human being can be alone? The interest to know some of his personality traits could showed some psychopathology or the fact that he is just gay, some facts are that he never showed interest in girls, a dog that is unambiguously heterosexual having the tendency to be distracted by lady dogs, tendency that is blocked by his owner, what about his best friend, a middle-aged sailor? Really? So, the writer might want to keep him in the closet all these years (2).

No. 152
Use of Electroconvulsive Therapy in Patients With Major Depression and a Comorbid Borderline Personality Disorder
Poster Presenter: James Hyun Lee

SUMMARY:
Background: Previous research suggests that electroconvulsive therapy (ECT), a gold standard in the treatment for severe unipolar depression, is not as effective when the patient presents with a comorbid borderline personality disorder (BPD). To test this claim, ECT outcomes of patients with and without BPD were compared in a retrospective chart review. Methods: The study consisted of 137 patients with a diagnosis of unipolar major depression who completed the McLean Screening Instrument for Borderline Personality Disorder (MSI-BPD). 29 met criteria for BPD. The difference in PHQ-9 scores before and after ECT was compared between the BPD and non-BPD groups. Data about rehospitalizations and follow-up PHQ-9 scores post-treatment were collected and analyzed. Results: ECT markedly improved symptoms of depression in both patients with borderline personality disorder and those without the disorder (Mean PHQ-9 score pre-ECT = 20.42; Mean PHQ-9 score post-ECT = 7.24; $p < .001$). There was no difference in PHQ-9 score differences between the BPD (Mean difference = 14.38) and non-BPD groups (Mean difference = 12.84, $p = .851$). After ECT treatment, both groups underwent a characteristic increase in PHQ-9 score. There was no difference in the degree of PHQ-9 increases between the two groups over the following six months after receiving treatment ($p = .763$). Conclusions: Unlikely prior research, these

data show that patients with and without BPD respond equally well to ECT, and the rates of symptom recurrence post-ECT and rehospitalization were not significantly different between the two groups. These findings may reflect that clinicians in our institution have learned to avoid ECT in the treatment of chronic misery in BPD but still use the treatment for severe neurovegetative depressions in patients with and without BPD. Consideration of ECT in these cases of BPD may be warranted.

No. 153

Psychological Attributes and Psychosocial Barriers to Prevention of Recurrent Self-Inflicted Burns

Poster Presenter: Joshua Ryan Smith, M.D.

SUMMARY:

We report the case of a 31 year old Caucasian male who has repeatedly presented to our institution for self-harm by chemical burn using sodium hydroxide (Oven Cleaner) and who has required multiple surgical interventions over a five year period. This case report was done in conjunction with the plastic surgery department. In this vein, we discuss self-inflicted burns from both a surgical and psychiatric perspective. From a surgical standpoint the mortality, specifics of injury, and need for psychiatric co-management of cases similar to this are explored. Additionally, the difficulty with diagnostic nosology of recurrent self-inflicted injury is discussed along with challenges in obtaining stable outpatient psychiatric follow up in rural communities. This is done by investigating the specifics of funding for community service boards in Virginia. Lastly, given that this patient demonstrates features of Borderline Personality Disorder, the need for widespread application of generalist practices to meet psychotherapeutic needs of patients with similar presentations is discussed. This is a novel case report given that the topics of interdisciplinary care, diagnostic nosology, approach to generalist psychotherapeutic practices, and treatment availability are able to be discussed.

No. 154

The Reemergence of Borderline Personality Disorder Symptomatology in an Older Patient

Poster Presenter: Michael Frederic Weil Dreyfuss
Co-Authors: Andre Burey, M.D., Ross E. Goldberg, M.D., Julie B. Penzner, M.D.

SUMMARY:

Borderline personality disorder (BPD) symptomatology is typically seen to diminish with age, including decreased impulsivity, self-injurious behavior and suicidality. However, features of affective instability, unstable interpersonal relationships and identity disturbance may be more persistent across the lifespan of individuals with BPD. We present the case of a 69-year-old patient with BPD who presented with depressive symptoms and affective lability in the setting of multiple life stressors and recent retirement. Her presentation occurred following a period of relatively stable symptomatic dormancy during middle life while she was employed. Her example illustrates that patients may be susceptible to a resurgence of BPD symptoms in the setting of later life stressors and biological maturation, suggesting an enduring core psychopathology of BPD that is environmentally sensitive. BPD in later life is relatively less well studied. This case highlights the importance of understanding the course of BPD into later years, and examining which individual and environmental factors predict sustained remission.

No. 155

The Psychiatric Management of Adults With Intellectual Disability and Comorbid Borderline Personality Disorder: Is Medication Helpful?

Poster Presenter: Rupal Ekeberg
Co-Author: Richard John Hillier, Ph.D., MB.Ch.B.

SUMMARY:

Borderline personality disorder (BPD) is characterized by pervasive instability of emotions, interpersonal relationships, self-image, and behaviour. It has received increased clinical attention and has been more widely researched compared to other personality disorders, perhaps due to the nature of its presentation and associated risks and morbidity. It is present in approximately 1% of the population and has a lifetime prevalence of around 6% though rates in the intellectual disability (ID) population are not well understood or reported. We know that there is a higher prevalence in woman, perhaps because they are more likely to present to services for help. The numbers of people

with BPD are likely to be underestimated in the ID population as positive behavioural support plans are widely used to manage challenging behaviour1. Thus the challenging behaviour of BPD is often managed using positive behavioural support without the official diagnosis of personality disorder ever being given. There are a number of people at the mild end of the ID spectrum who do present more classically with mood instability, suicidal ideation and repeated deliberate self harm, often complicated by alcohol and substance misuse. These people have often been started on different medications for their depressive or anxiety symptoms, often with the working diagnosis of anxiety and depression. As occurs in the mainstream, these people often become embedded to a model of perceiving their hope in finding the "right" tablet that will resolve all of their symptoms. In the UK, there is currently no drug that has the marketing authorisation for the treatment of borderline personality disorder but in clinical practice, medications are often used to help manage comorbid mood symptoms and crisis situations2. Moreover, there is little evidence to support of the effectiveness of medications in BPD with few randomised controlled trials of interventions and further research necessary. In this poster we looked at adults with ID and an established diagnosis of BPD across two community services in London. We discuss how successful we have been in supporting these people to re-evaluate their treatment options and move away from the model of looking for the "perfect pill". We look at the role of psychotropic medication within the multidisciplinary management plan and effectiveness of medication on their clinical presentation.

No. 156

Treatment-Refractory Self-Injury by Starvation in an Adolescent Male With Borderline Personality Disorder

Poster Presenter: Brooke R. Mastroianni, M.D.

SUMMARY:

Borderline Personality Disorder is defined by DSM-5 as a pathological personality resulting in significant inability to function both personally and in society. Criteria of a borderline personality disorder include poorly developed self-identity, chronic feelings of emptiness, inability to set and pursue goals, disturbances in interpersonal functioning including decreased ability to empathize with others, emotional lability, frequent anxiety, depressed mood, fear of abandonment, and self-harm behavior. Self-harm behaviors most often are in the form of cutting, although this can encompass any self-injurious behavior. This case is of a 16-year old male with borderline personality disorder whose primary method of self-harm is self-starvation. This case is atypical due to the patient's presentation, co-morbid psychiatric conditions, and resistance to treatment. The most prominent co-morbid psychiatric symptomatology complicating treatment is severe obsessive-compulsive thoughts and behaviors, thus far refractory to treatment. The initial trigger for his self-harm behaviors and obsessive-compulsive tendencies was looking at pornography at 14-years-old and feeling extreme guilt afterwards. His guilt persisted and he felt the need to "punish" himself. This, along with emotional instability, disturbance in self-image, splitting, many episodes of self-harm by cutting and scratching, and ultimate self-harm by starvation brought his diagnosis of borderline personality disorder to light. There has been a significant debate regarding primary and subsequent diagnoses, understandably so as this is an incredibly complex case that has not responded to any treatment modality to date. The patient has persisted with food restriction, suicidal ideation, self-harm behavior, and mood instability through a variety of psychiatric facilities. His unique presentation, non-response to a variety of psychiatric treatments, and diagnostic complexity are discussed in this poster for a comprehensive look at this atypical case of self-starvation.

No. 157

Reviewing the Cluster A Personality Disorders Through the Music and Composition of Billy Joel

Poster Presenter: Shawen Maryrose Ilaria, M.D.
Co-Author: Anthony Tobia

SUMMARY:

We aim to review the Cluster A Personality Disorders, including Paranoid Personality Disorder, Schizoid Personality Disorder, and Schizotypal Personality Disorder through the music and composition of Billy Joel. We review the etiology and

clinical characteristics of these Personality Disorders through multiple works of the singer and songwriter including Pressure, Sometimes a Fantasy, and You May Be Right. To our knowledge, this is the first pedagogic analysis of personality disorders through music.

No. 158

Factors Associated With Improvements in Real-World Functioning in an Early Stage of Schizophrenia: A One-Year Follow-Up Study

Poster Presenter: Leticia Gonzalez-Blanco
Co-Authors: Maria Paz Garcia-Portilla, Leticia Garcia-Alvarez, Lorena de la Fuente Tomás, Pilar A. Sáiz, Celso A. Iglesias, Julia Rodriguez-Revuelta, Angela Velasco, Julio Bobes, M.D., Ph.D.

SUMMARY:
Background: Negative, cognitive and depressive symptoms, as well as physical comorbidities, have a great impact on the real-world functioning in patients with schizophrenia (SZ) (1,2,3). However, not all the studies have considered all these factors simultaneously nor have been analyzed in longitudinal studies. The objective was to determine if clinical or biological factors at baseline could predict improvements in the functionality of SZ at 1-year follow up. Methods: Prospective study of 57 stable outpatients with SZ (less than 10 years of illness) [mean age= 31.5±6.5; 63.2% males]. Clinical variables: PANSS, CGI-Severity, Clinical Assessment Interview of Negative Symptoms (CAINS) - Motivation/Pleasure (MAP) & Expression (EXP) domains-, Brief Negative Symptom Scale (BNSS), Calgary Depression Scale (CDS), MATRICS Consensus Cognitive Battery (MCCB), PSP. Biological variables: Glucose, cholesterol, LDL, HDL, triglycerides, TSH, prolactin, insulin, uric acid, alkaline phosphatase (APh), C-reactive protein (CRP), TNF-α, interleukin(IL)-6, IL-2, IL-1β, IL-1RA, homocysteine, HT (% hemolysis), lipid peroxidation (LPO), catalase. Pearson correlations and multiple linear regression analyses were performed to identify variables significantly related to changes in PSP scores at follow-up [PSP follow-up score − PSP baseline score]. Age, sex, education, and other potential confounding factors were considered. No significant changes in BMI, waist circumference, smoking or antipsychotic equivalent doses at follow-up were detected, but they were also considered in regression analyses. Results: At follow-up PSP average score did not significantly change from baseline (56.3±19.9 vs. 54.5±18.3; t= -1.397). Final regression model for improvements in PSP total score at follow-up (R2=0.312, F=5.605, p=0.003) identified that speed of processing T-scores of MCCB (β= 0.337), % hemolysis (β= 0.310) and homocysteine levels (β= 0.310) were significant predictors. Discussion: Increased levels of oxidative stress biomarkers and better cognitive performance at baseline, specifically the speed of processing domain, predict better outcomes of real-world functioning at 1-year in an early stage of SZ.

No. 159

Computer-Delivered Cognitive Behavior Therapy as Care Augmentation for Depressed Primary Care Patients

Poster Presenter: Arthur Secundino Leitzke, M.D.
Co-Author: Roderick R. Stuart, M.D.

SUMMARY:
Background: The 12-month and lifetime prevalence rates of Major Depressive Disorder in the US are 6.6% and 16.2%, respectively . Depressed individuals are most frequently treated in the primary care setting . Cognitive behavior therapy has been shown to have efficacy similar to antidepressant medication for Major Depressive Disorder and to be at least as efficacious as other psychotherapies . Computerized Cognitive Behavioral Therapy (cCBT) offers an avenue for addressing the demand and cost of CBT and providing its benefits in primary care , .. To date there have been no published studies that determine the financial benefit to a health plan of offering cCBT to its adult primary care population. Our randomized controlled study evaluated the efficacy of depression treatment augmentation with cCBT in primary care patients. Methods: The study setting was Kaiser Permanente's Family Medicine Clinic in Fontana, CA. Adult patients newly diagnosed with depression were emailed or mailed an invitation to participate, and were asked to visit a recruitment website where they completed a questionnaire to assess eligibility (PHQ-9 score ?5). Eligible patients who provided informed consent were randomized to intervention or treatment as usual. Participants in the treatment arm were were

emailed a code to access a computerized 8 week Cognitive Behavioral Therapy program (Thrive - Waypoint Health Innovations). The primary outcome was PHQ-9 scores. These scores were measured at baseline and 2 and 6 months follow-up, Preliminary data from the 2 month follow-up are reported . Results: 297 patients were randomized, of whom 180 (60%) completed the two month follow up and were analyzed. Participants mean age was 47.2, and19% were male. Baseline PHQ-9 scores for for theintervention and control group were not significantly different (mean=14.32 vs. mean=14.75p=0.9473). At 2 months follow-up, the PHQ-9 score was significantly different between the intervention and control groups (mean=8.531 vs. mean=11, P=0.0098). Endpoint subgroup analysis of the PHQ-9 score between control and treatment groups showed significance only for those patients with initial score between 5-9 (P=0.0168) (Mean – Control=6.8, SD=3.489; Treatment=4.0, SD=3.024) and 10-14 (P=0.0494) (Mean – Control=9.516, SD=4.106; Treatment=7.259, SD=4.736). Patients with initial PHQ-9 score of 15-19 (P=0.5719) and 20-27 (P=0.6132) did not show significant difference between control and treatment groups. Conclusion: In adult patients diagnosed with depression in primary care, the addition of a 8 week computerized CBT program reduced depressive symptoms among patients with mild to moderate symptoms.

No. 160

Starting a New Psychodynamic Psychotherapy Resident Teaching Clinic: Wellness for Patients, Residents, and Supervisors

Poster Presenter: Kathleen K. Burns, M.D.
Co-Authors: Jacqueline A. Hobbs, M.D., Gary Lawrence Kanter, M.D.

SUMMARY:
ACGME requires that residents have significant experience evaluating and treating individual psychotherapy patients longitudinally for at least one year, along with demonstrating competence in psychodynamic psychotherapy. Psychodynamic psychotherapy clinic was created to allow residents protected time for education, development and utilization of learned skills, and to receive supervision from attendings to improve competency and quality of care. It all started when a psychiatrist with 35 years of private practice experience as a psychodynamic psychotherapist decided to come back to academics. His dream was to develop a psychodynamic psychotherapy training clinic for residents. One year later after his feet were firmly planted in the academic world, the training director reminded him of his dream then told him to make it happen. Twelve residents participating in their PGY-3 yearlong longitudinal outpatient experience were divided into two groups. Each group was assigned to either a Tuesday or Thursday 4-6 PM psychodynamic psychotherapy clinic. The structure included two 50-minute patient sessions and group supervision with two attendings and other residents in the same clinic between and after the sessions. Attendings used a structured supervision covering major themes, goals of therapy, identified affects, appropriate patient selection, etc. The goal of group supervision is to assist the resident in preparing for individual supervision, which occurs for 2 hours at additional times during the week. Prior to the first scheduled patient, there was a 1-month weekly seminar during the same 4-6 PM time to prepare residents for the beginning of psychotherapy clinic. Supervisors interviewed patients through a one-way mirror to allow residents to see how an initial psychodynamic psychotherapy interview is performed and how it is different from the typical new patient evaluation. Other teaching techniques included the use of the HBO series In Treatment to discuss psychodynamic themes. Results to date are that residents have learned the importance of being present and connected with the patient. They are learning to truly listen, follow the patient's "agenda" and not their own, and maintain appropriate boundaries. They are also learning the intricacies of supervision. Ultimately, via the psychodynamic psychotherapy clinic, the residents are getting back to a true focus on their patients that will hopefully contribute to improving their overall satisfaction with the training experience and enhancing their wellbeing. Faculty supervisors are rediscovering the joy of teaching through observing the weekly growth of the budding psychodynamic psychotherapists.

No. 161

Improvement of Patient Follow-Up in the UT Health SA Psychiatry Resident Psychotherapy Clinic

Poster Presenter: Kavita Demla

Co-Author: Adrian Paolo Agapito, M.D.

SUMMARY:
Background: Psychotherapy has been shown to improve patient outcomes in many mental health conditions when compared to treatment with medications alone and can also be effective monotherapy in some cases. Training in psychotherapy is therefore an important element of education for psychiatrists. Psychiatry residents at the University of Texas Health San Antonio have an ongoing therapy training experience at the ADVANCE clinic. However, many patients entering the ADVANCE clinic do not follow up after their initial evaluation, which impedes patient care, resulting in poorer outcomes, and leads to deficiencies in resident education. This study aims to increase the number of completed follow-up psychotherapy appointments by 50% during a two-month period. Methods: baseline data were extracted from the electronic medical record to review number of follow-up appointments attended over a two-month period. These patients were surveyed to determine barriers to psychotherapy attendance. At the start of intervention, psychoeducation regarding commitment for maximal therapeutic response was provided in both verbal and written format via discussion of goals and expectations and providing a flyer to the patient, respectively. Additionally, multiple follow up appointments were scheduled after the initial evaluation. Results: findings from the survey of barriers to attending follow-up appointments demonstrated the following in order of highest to lowest mode of responses: patient being too busy, change of insurance, patient disliking therapy, limited provider availability, patient disliking therapist, provider-initiated, patient preferring medication management only, and transportation issues. Results of percent of residents with more than three follow up appointments over a two-month period of intervention were averaged to be 30%, which is not statistically significant when compared to results from before the intervention. Conclusion: our aim was not successfully achieved thus far from preliminary results, however data from subsequent two-month cycles of intervention will continue to be collected. We also aim to collect baseline and subsequent Hamilton Anxiety rating scales in order to trend another possible component of improvement with this intervention. If results continue to be statistically insignificant, we will reevaluate and address other variables in barriers to follow-up. This includes expanding scheduling options by considering a weekend or evening clinic and creating a task force to explore and assess therapist variables to improve patient-therapist fit. Aiming to increase therapy follow-up will contribute to improvement in patient symptoms, resident education and competency, and support of clinic revenue to allow for continued ability to address the mission of education.

No. 162
Decoding Psychotic Images Through Art Psychotherapy and Exploration of Potential Application of Virtual Reality
Poster Presenter: Mani Yavi, M.D.

SUMMARY:
The application of art psychotherapy allows exploration of psychotic mental states and can assist in recreation of disconnected mental images. Through the empathetic guidance of the therapist and artistic self-expression, where the logical expression and the pressure of time are minimised, patients are able to express deep affective and idiosyncratic material. Pictures created in art therapy can be valuable windows to the intrinsic mental states of the schizophrenic patient. In this report we present and detail the application of art therapy on the inpatient setting, in particular focusing on cases with schizophrenia, to transform anxious, psychotic mental imagery to forms that are psychologically more adaptive and reality-oriented. Lastly we will review the literature on advances in the field of Virtual Reality and discuss the potential of this emerging technology to augment treatment modalities.

No. 163
Is It Possible to Experience the Nature of Psychotherapy in One Session for the Medical Students?
Poster Presenter: Yong Chon Park, M.D.
Co-Authors: Yubin Cho, Mirim Yun, Seokmin Noh

SUMMARY:
Receiving psychotherapy is one of the best ways of

training for psychotherapy, along with supervision and the literature review. However the medical students in Korea learn psychotherapy in the classroom and the contents are limited to introducing theories of psychotherapy. For over twenty years, the author found that touching the emotion is the most influential impact to the medical students, for most of them have alexithymia tendency. The only chance for medical students to experience psychotherapy is during the rotational clerkship. Therefore, the author tried to develop the way of experiencing psychotherapy for medical students in one session.

No. 164

Clozapine-Induced Symptomatic Hepatotoxicity

Poster Presenter: Stephanie Sutton, M.D.
Co-Author: Sriram Ramaswamy, M.D.

SUMMARY:

We present a case of symptomatic clozapine-induced hepatotoxicity in a 48-year-old Asian American female at the VA Hospital. The patient was started on clozapine for treatment-resistant Schizophrenia after failing multiple antipsychotic trials including dual antipsychotic therapy. She initially tolerated the medication well and experienced a significant improvement of symptoms including auditory hallucinations. She was followed weekly in the VA clozapine clinic. About six weeks after the initiation of clozapine, the patient presented to the clinic with malaise, fatigue, and abdominal pain. After evaluation by the psychiatrist and the primary care physician including obtaining lab work, it was determined that the patient had developed clozapine-induced hepatotoxicity. The medication was discontinued due to her side effects including rising LFTs. Most psychiatrists focus on the risk of agranulocytosis in patients on clozapine requiring CBC with differential, however it is also important to monitor other labs early on during the initiation process including CMP. Some elevation of LFTs during clozapine treatment can be asymptomatic and transient, however there have been cases of fulminant hepatic failure in the literature (1). Deciding whether or not to re-challenge clozapine after elevated transaminases is a decision the provider needs to make. While there are not many cases of clozapine-induced symptomatic hepatotoxicity in the literature, a surprising number of the reported cases are found in female patients ranging from ages 39-50 (2). Multiple patients had Asian background such as our patient. We will explore if female gender or Asian ethnicity puts a patient at risk of clozapine-induced hepatic adverse effects. While clozapine can be an extremely effective medication for patients who suffer from treatment-resistant Schizophrenia, Schizoaffective Disorder, and Bipolar Disorder, it requires close monitoring due to serious side effects that can lead to morbidity and and even mortality.

No. 165

Wellbutrin-Induced Dystonia: A Case Report and Review of Literature

Poster Presenter: Vikas Gupta, M.D., M.P.H.
Co-Authors: Roopma Wadhwa, M.D., M.H.A., Marsal Sanches, M.D., Ph.D.

SUMMARY:

Case: Ms. A., a 28-year-old Caucasian female with a past psychiatric history of major depressive disorder, ADHD and alcohol use disorder, presented to psychiatric outpatient clinic with worsening jaw clenching since the past month. She has complaints of neck and jaw stiffness and feels she has been more fidgety lately. Patient notes that jaw clenching and difficulty with head rotation is making it very difficult for her to function. She has tried physical therapy and used dental guard to protect her teeth. Patient has also maintained sobriety from alcohol for the past 2 months. Prior to coming for this visit, Ms. A. was being prescribed 20mg fluoxetine, 40mg lisdexamfetamine dimesylate (Vyvanse) and 450mg bupropion XL. Bupropion XL was started 8 weeks ago with dose augmentation in the past month. Reduction of the bupropion dosage to 300mg XL once daily improved the symptoms in 3 days and further reduction to 150mg daily totally resolved the symptoms after 2 days of dose reduction TO 150mg.
Discussion: Medication-induced focal dystonias may present with dramatic head and neck muscle spasm with occasional jaw clenching, bruxism, and TMJ syndrome. In this case, the jaw clenching and neck stiffness resolved partly with dose reduction in 3 days and ameliorated completely on further reduction of dose of the offending agent.
Conclusion: This case suggests that some patients

may experience dose-related acute dystonic adverse reactions to bupropion. Dystonias have been linked to acute dopamine depletion and basal ganglion-derived gamma synchronization dysfunction. This is more commonly seen in antipsychotics. However, bupropion also has been implicated in reports of medication-induced dystonia.

No. 166

Aripiprazole and Gambling Disorder: A Qualitative Review of Literature

Poster Presenter: Yam Giri

SUMMARY:

Background: Aripiprazole (ARI), a second-generation atypical antipsychotic, is among one of the commonly prescribed psychotropic medication. Food and Drug Administration (FDA) has approved it for the treatment of schizophrenia, an acute manic episode of bipolar disorder, as an adjunct for both major depressive disorder and maintenance phase of bipolar disorder, and autism-related irritability. ARI-related gambling disorder (GD) has been increasingly reported in the literature, mostly from Australia and Europe, and it causes psychological distress, financial losses, and social consequences. It is believed to cause GD due to the hyperdopaminergic state in the meso-limbic pathway as a result of its agonist properties in dopamine-3 (D3) receptors and partial agonist action in D2 receptors. Methods: To gain deeper insights of this growing concern, we conducted the literature search in PubMed/Medline, Google Scholar, relevant websites, and textbooks, and reviewed the published articles. We included three case reports, five case series encompassing 18 cases, one case-control study, and other review articles that were published in the English language. Results: We identified 21 published cases of GD associated with ARI included in three case reports, five case series. Majority of subjects were male (number of cases, n=20) and remained one was female. The average age of the subjects was 34.7 years. Majority of patients received oral ARI 15 mg/day (n=9), followed by 20 mg/day (n=6), 10mg/day (n=4) and 5mg/day (n=2). Out of 21 cases, 12 cases were found to have increased in prior gambling behavior after ARI treatment, whereas remaining nine subjects developed new onset GD. The onset of gambling after ARI initiation was few months (n=11), few weeks (n=4), few years (n=3), and few days (n=1). ARI discontinuation resulted in complete resolution of GD in the majority of cases (n=17) and decreased in gambling in one case whereas in two subjects GD was resolved with specialized care and psychotherapy without stopping ARI. Reducing the ARI dosage resulted in the reduction in gambling in remaining one case. In the majority of cases, GD resolved or decreased in severity in few weeks (n=9) to few months (n=7). Conclusion: All prescribers should be aware of the association of ARI and GD and patient should be assessed for the increased risk of GD before starting ARI especially with the prior history of impulse control disorders and gambling behavior. Close monitoring of such behavior, early identification, and appropriate treatment can help prevent the harmful consequences of GD.

No. 167

Severe Nephrolithiasis and Hyperammonemia Associated With Topiramate: Case Reports and Review of the Literature

Poster Presenter: Zhong Ye, M.D.

Co-Authors: Louis W. Solomon, M.D., Jacqueline A. Hobbs, M.D.

SUMMARY:

Topiramate is a pharmacologic agent approved for seizure treatment and migraine prophylaxis but is also recognized in the psychiatric community as an off-label agent for bipolar disorder, substance use disorders, bulimia nervosa, binge eating, PTSD and neuropathic pain. Its diverse usage is attributed to its wide range of CNS effects such as GABA agonism as well as antagonism of voltage-gated sodium channels, L-type voltage-activated calcium channels, carbonic anhydrase isozymes and AMPA/kainite receptors. Thus, topiramate's most noted side effects are fatigue, dizziness, memory impairment, paresthesia, coordination problems and visual deficits – all attributed to topiramate's direct effects on the CNS. Less talked about are the metabolic effects. The discussion of topiramate-induced metabolic side effects rarely spans beyond anorexia and weight loss. This poster presents two cases that address two less known metabolic effects – topiramate-induced nephrolithiasis and topiramate-induced hyperammonemic encephalopathy. In the

former, a 57-year-old female patient with bipolar disorder and PTSD was admitted to the psychiatric hospital for treatment of severe depression. Topiramate was initiated due to the patient's complaint of severe migraine headaches exacerbating her depression. Within 6 weeks, she developed severe flank pain, fever, vomiting, low urine output, and hematuria. Imaging revealed a left 7-mm obstructing stone and bilateral nephrolithiasis. Though the patient had a history of nephrolithiasis and a stent placement over 25 years ago, the timing of such a severe exacerbation after so many years may indicate a role of topiramate that is known to contribute to nephrolithiasis. In the latter case, a 56-year-old female with a history of bipolar disorder, PTSD and seizures was admitted for suicidal ideations in a major depressive episode. She was restarted on her self-reported home medications, one of which was topiramate 100mg TID for seizure disorder. She started becoming more confused and by day 5, she was obtunded and transferred to the emergency room. Her ammonia level was 155. She was promptly treated with lactulose, and topiramate was discontinued. Her ammonia levels trended down, and she recovered quickly. She later stated she was not sure if she had actually been taking topiramate at home. Neurology was consulted and concluded that this was a case of topiramate-induced hyperammonemia. Both cases above resulted in severe patient compromise that resolved after topiramate was discontinued. The mechanisms behind these adverse reactions are not entirely understood, but the top hypothesis for both stem from topiramate's inhibition of carbonic anhydrase. Given topiramate's frequent and ever-expanding off-label use, psychiatrists should be aware of these possible adverse effects. This awareness should prompt careful consideration of past medical history prior to prescribing topiramate as well as proper monitoring and preventative measures.

No. 168

The Black Box Warning of Cymbalta - Fact or Fiction?

Poster Presenter: Hanan Khairalla, M.D.
Co-Author: Vandana Doda

SUMMARY:
The FDA warns about the increased risk of suicidal thoughts and behavior in patients who are prescribed antidepressants, particularly children, adolescents and young adults. Short-term studies did not show an increase in the risk of suicidality with antidepressants compared with placebo in adults older than 24 years. In this case report, we discuss a case of a 29 year old patient with history of depression and chronic bilateral lower extremity pain who presented to the Emergency Room with new onset suicidal thoughts after an increase in the dose of Cymbalta from 60 mg daily to 90 mg daily. The patient had been on Cymbalta for 3 months prior to the emergence of the suicidal thoughts. He was subsequently hospitalized and treated with gabapentin, venlafaxine, melatonin and hydroxyzine. Within 24 hours, the suicidal thoughts dissipated and the depressive symptoms had improved. This case indicates that Cymbalta can increase the risk of suicide in individuals older than 24 years of age and that the risk is also present with higher dosages. Overall, Cymbalta is a safe medication but physicians should closely monitor all patients, irrespective of age during the first three months of treatment.

No. 169

Near Suicide Attempt in a 17-Year-Old With Pseudo-REM Sleep Behavior Disorder Associated With Undiagnosed Obstructive Sleep Apnea: A Case Report

Poster Presenter: Hanan Khairalla, M.D.
Co-Authors: Lancer Naghdeci, Nicole A. Guanci, M.D.

SUMMARY:
The importance of evaluating sleep quality in adolescents is tantamount. In this case report, we discuss a 17-year-old female with a history of major depressive disorder, recurrent, in partial remission and pseudo-REM Sleep Behavior Disorder (RBD) secondary to undiagnosed obstructive sleep apnea (OSA) who was found attempting to hang herself with no knowledge or recollection of the event in the absence of an acute mood episode. After not responding to her mother's calls, she was found in a "daze" standing in her underwear on a chair with a belt tied in a noose with scotch-tape and hung on a "toy string" on the ceiling. She was confused upon questioning by her mother and stated that was not aware of what she was doing – an apparent suicide attempt that was ego-dystonic to her. She

subsequently returned to baseline with no further incidences since. On evaluation three days later, the patient reported that she was dreaming about a friend who committed suicide by overdose when the patient was in sixth grade. The patient recalled that in the dream, she was extending her hand to try to reach out to her friend when she heard her mother calling her, causing her to awaken to finding herself standing on top of the chair with no recollection of how she got there. The patient reported history of misplaced objects in her room with no recollection of moving them. Her mother reported finding drawings of corpses on the wall while patient was sleeping once when she was in sixth grade. The patient admitted having issues with sleep duration and being unable to fall back asleep. Her mother denied recent changes in patient's baseline mood (described as "somber" and chronically depressed at 5/10), recent changes in behavior, and neurovegetative symptoms. The patient admitted that she often thinks about death but denied suicidal thoughts since one year prior, homicidal thoughts, manic, hypomanic or psychotic symptoms. Her family history included a sibling with autism and a father with parkinson's and dementia. On examination, the patient's vital signs were stable and mental status exam was within normal limits with the exception of a constricted affect. The patient was worked up for seizure disorder versus REM sleep disorder. The EEG study ruled out seizure disorders. However, the overnight polysomnography study showed findings consistent with a diagnosis of obstructive sleep apnea. Patient was thus diagnosed with OSA and Pseudo-RBD. This case highlights the importance of sleep studies and diagnostic clarification in adolescents presenting with stable mood symptoms and inconsistent behaviors related to disrupted sleep.

No. 170

A Case of Valproic Acid-Induced Hyperammonemic Encephalopathy Complicating Dementia

Poster Presenter: Yara Moustafa, M.D., Ph.D.
Co-Authors: Ivonne Torriente Crespo, M.D., Alican Dalkilic, M.D.

SUMMARY:
Valproic acid has been used in the treatment of epilepsy, bipolar and schizoaffective disorder, dementia-related agitation and neuropathic pain effectively. However, it can elevate blood ammonia levels, which might lead to clinically significant situations such as hyperammonemic encephalopathy. Valproic acid-induced hyperammonemic encephalopathy may occur in people with normal liver function, despite therapeutic doses and serum levels of VPA. Here we present a patient who has been on valproic acid for more than 7 years for treatment of Schizoaffective disorder and dementia-related aggressive behavior. Patient developed insidiously fluctuation in attention, and appeared to be sleepy and lethargic for most of the time over the course of several days. Ammonia level testing revealed high ammonia level 68 mumole/L (range is 0-47 mumole/L), despite that liver function enzymes and valproic acid level 95.8 (range is 50-100 MG/L) were within normal ranges. Interestingly, previous research showed that elevations in plasma ammonia levels, as high as 140 mumole/L, were well tolerated, and valproic acid dose reductions were not necessary if not symptomatic (Murphy and Marquardt, 1982). A review of the literature of similar reported cases and their management will be included, in addition to discussion of the course and outcome of this case.

No. 171

Should Cruelty to Animals Be Regarded as a Mental Illness?

Poster Presenter: Yara Moustafa, M.D., Ph.D.
Co-Author: Roger Peele, M.D.

SUMMARY:
Psychiatrists' efforts to explore and analyze animal cruelty behavior have been going on for over half a century. One of the earliest observations by Margaret Mead, was that the torturing or killing of "good animals" by a child may be a precursor for a more violent act in adulthood. In this paper, not having a word, we will use "Act." We will review the definition, the differential, the epidemiology, the legal status, preventive aspects and the pros and cons of conceptualizing the Act as a mental disorder. The Act refers to being cruel to animals and insects without sexual pleasure in doing so. It differs from zoosadism and zoophilia is that there is no sexual pleasure or attraction in being cruel to animals and insects. We are referring to intentional acts that

cause pain or suffering, such as beating, choking, dragging, burning, suffocating, drowning, kicking, stomping, mutilating, stabbing, throwing, etc. We are not including cruel behavior that is part of overworking farm animals, animal theft, dog or cock fighting, or hunting. While the Act might be part of conduct disorder or antisocial personality disorder, the Act only refers to the behavior of cruelty, not the other findings. We will cover DSM-5's expectations as to defining a mental illness. Moreover, investigating the motives behind the act of animal cruelty showed that inmates who abused animals out of fun in their youth was the most statistically salient motive for predicting later interpersonal violence. Taken together, Animal Cruelty Syndrome is particularly important for the Public health Sector, and should be part of public health policies.

No. 172

Paraphilia or Paraphilic Disorder? Dilemma for the Providers and Parents

Poster Presenter: Reena Kumar, M.B.B.S.
Co-Author: Jane Agnes Ripperger-Suhler, M.D.

SUMMARY:

Praaphilic disorders are not the most common cases seen in the hospital setting, Even if the pt is suffering from paraphilia, pt might not share it with the provider because of the shame associated with the disorder. Paraphilia denotes intense and persistent sexual interest other than sexual interest in genital stimulation or preparatory fondling with phenotypically normal, physically mature, consenting human partners. Paraphilia by itself does not necessarily require or justify psychiatric treatment in itself. Paraphilic disorder is defined as "a paraphilia that is currently causing distress or impairment to the individual or a paraphilia whose satisfaction has entailed personal harm, or risk of harm, to others".[5] One would ascertain a paraphilia (according to the nature of the urges, fantasies, or behaviors) but diagnose a paraphilic disorder (on the basis of distress and impairment). In this conception, having a paraphilia would be a necessary but not a sufficient condition for having a paraphilic disorder." Paraphilic disorder = paraphilia + distress/harm to self or others By this case report we hope to increase the awareness of this rare disorder and the stigma associated with it. As not all the patients with paraphilia become sexual offenders, but if parents and society's outlook towards the praphilia doesn't improve, then we will be increasing patient's mental illness, like what happened in this case and may be adding to the number of suicides.

No. 173

Paraphilia Go! A Case Report of a 14-Year-Old Male With Rare Co-Existing Vorarephilia and Toonophilia Who Was Admitted With Psychosis

Poster Presenter: Meredith A. Okwesili, M.D.
Co-Authors: Sindhura Kunaparaju, M.D., Candace Romo

SUMMARY:

Paraphilias are rare disorders characterized by bizarre or unusual preferences and acts which are repeated and preferred to normal sexual activity. In this poster, we present a rare case of co-occurring paraphilias in a 14 year old hispanic male patient with no previous psychiatric history, admitted to the inpatient unit with superficial cutting and command auditory hallucinations to end his life. He reported having a "nervous breakdown" after his mother took away two of his plush toys; "mega evolution/mega Gardevoir." As per collateral information from his mother, she walked in on the patient performing sexual acts on his Pokemon plush toys. He denied any command auditory hallucinations regarding performing sexual activities. He reported the emergence of hallucinations following psychosocial stressors such as bullying which began two years prior. He was often seen to be isolative with a decrease in memory and concentration. He was diagnosed with toonophilia, among other diagnoses, as he expressed obsessive sexual thoughts about Gardevoir with feelings of anxiety, confusion and conflict with self. Vorarephilia ("vore") is an infrequently presenting paraphilia, characterized by the erotic desire to consume or be consumed by another person or creature. In addition to his love affair with the Gardevoir, he reported watching "vore" multiple times a day in order to relieve stress/anxiety. Few data exists on vore, but there have been some cases where vorarephilic interests were expressed. Because this sexual interest cannot be enacted in real life due to physical and/or legal restraints, vorarephilic fantasies are often composed

in text or illustrations and shared with other members of this subculture via the Internet. With the emerging use of social media and internet use, there is increasing scope for an emergence of rare paraphilias such as vorarephilia and toonophilia in the adolescent population. In this poster, our goal is to educate, create awareness, and discuss the challenges and importance of recognizing such paraphilias, in regards to the well-being of children and adolescents.

No. 174

Case Report: Topiramate-Induced Hypokalemia and Its Associated Risks in Combination With Other Psychiatric Medications

Poster Presenter: Ghulam Sajjad Khan, M.B.B.S.
Co-Authors: Shivanshu Vijaykumar Shrivastava, M.B.B.S., Juvaria Anjum, Najeeb U. Hussain, M.D., Ketan A. Hirapara, M.B.B.S.

SUMMARY:
In our case 31-year -old African American male with past psychiatry history of paranoid schizophrenia was presented for acting bizarre, sexually inappropriate behavior and hearing voices. Initially guarded and internally preoccupied. He was started on Clozapine, Fluoxetine and Topiramate. His initial EKG showed QTc prolongation and labs showed electrolyte imbalance of low Potassium levels. Patient was started on K- DUR. Fluoxetine was discontinued and repeat EKG was normal towards the end of first week. His potassium levels were still low. Potassium treatment was titrated and given. During his second week of inpatient hospital course patient's EKG was normal, less bothered by the auditory hallucination and more cooperative. Therefore, the concomitant use of Fluoxetine along with Topiramate and other psychiatric medications lead to the QTc prolongation. Our Poster will discuss about Pro arrhythmia caused by QTc- prolongation and multiple factors need to be considered for precipitating such an event including metabolic imbalance like hypokalemia, combination of two or more drugs affecting through different mechanisms and leading to cause the same result, as Topiramate act through many mechanisms including inhibiting carbonic anhydrase (lead to metabolic acidosis/ Hypokalemia). Novel antidepressants, fluoxetine (SSRI's), prolong the QT interval by inhibiting potassium channel. Patient's response to a drug is very individual and therefore an individualized system of drug administration and monitoring needs to be developed.

No. 175

Protracted Amnesia/Catatonia Post Anesthesia: Case Report, Status Post Propofol Induced Routine Anesthesia, Protracted Amnesia, and Catatonia Symptoms

Poster Presenter: Ghulam Sajjad Khan, M.B.B.S.
Co-Authors: Erin Zerbo, M.D., Juvaria Anjum

SUMMARY:
A 32-year-old female with no past psychiatric history, presented to the emergency department with four-day history of amnesia, confusion and paucity of speech following gastroscopy and colonoscopy performed under monitored sedation using Propofol. Following the procedure, the patient exhibited minimal speech, redirected multiple times and had difficulty with recall for several hours. Diazepam was given with little improvement and patient was discharged home with family and a prescription and were told to return to the hospital if symptoms did not improve. She subsequently returned to the hospital and received full neurological workup which was negative. Later, patient presented to the psychiatric emergency room, she was guarded, disinterested, mute with blunted affect, cognition was grossly intact, but was unable to be assessed for thought process and content. She was given Lorazepam and was admitted to the inpatient psychiatric unit where she was evaluated for mutism, amnesia, blank stare, poor eye contact and psychomotor deficits. Patient denied any symptoms of depression, mania, psychosis, suicidal or homicidal ideation. She was restarted on lorazepam, titrated dose based upon her response. There was a significant improvement noticed in her memory, mood, and ability to perform routine task. In our poster, we will discuss our case report of response to lorazepam and co-occurring catatonia with amnesia and the importance of diligence to diagnose especially in postoperative states.

No. 176

Exposure to Dim Light at Night During Sleep May

Have Effect on Next Day Fatigue in Humans
Poster Presenter: Ahreum Cho
Co-Author: Chul-Hyun Cho

SUMMARY:
Background: Exposure to light at night has become pervasive in modern society. Effect of dim light at night (dLAN) exposure during sleep on human's fatigue is not well recognized. We aimed to study the impact of dALAN exposure during sleep on human's fatigue through well-designed experimental study. Methods: 30 healthy young male volunteers from 21 to 29 years old were enrolled into the study. They were randomly divided into two groups depending on light intensity (Group A: 5 lux and Group B: 10 lux). After exclusion of problematic sleepers, 20 male subjects finished the whole study. Data about the fatigue were gathered from each participant after each night with no light (Night 1) followed by the next night (Night 2) with two different dim light conditions (5 or 10 lux) by means of self-reported fatigue scale. Results: Exposure to dLAN during sleep was significantly associated with increased overall fatigue ($F=19.556$, $p<0.001$) and ocular discomfort ($F=5.671$, $p=0.028$). But, there was no significant group-night interaction. Conclusion: We found that dLAN during sleep probably affects human's fatigue in some aspects. These findings suggest that dALAN during sleep exerts a negative effect on human's fatigue.

No. 177
Pediatric Bipolar: New-Onset Bipolar Disorder
Poster Presenter: Hadia Crider

SUMMARY:
BACKGROUND:16 year old male with no past psychiatric history seen for the first time in Psychiatry clinic for bizarre behavior starting 1.5 months ago. On assessment patient was disorganized and circumstantial. He endorsed AH/VH hallucinations with a male voice talking to him outside his head. His friends observed him talking to himself when nobody was present multiple times. Patient was responding to internal stimuli during assessment and would get distressed when discussing the voices. Patient screened for mania with history from mom. Mom reported over the past month patient stayed up for two straight days, would speak rapidly, and was rearranging his room late at night. He was not acting like himself. He endorsed delusional thoughts regarding the military. Patient endorsed suicidal thoughts with a plan to shoot himself. Patient was referred for acute inpatient psychiatric stabilization from clinic. He was diagnosed with Bipolar Disorder Type 1 with psychotic features. This was confirmed with psychological testing with the Minnesota Multiphasic Personality Inventory Adolescent (MMPI-A). He is currently taking Lithium 300mg BID, Seroquel 100mg qhs, and Trazadone 50mg qhs for mood stabilization, psychotic features, and insomnia and is stable. Patient's biological father had similar psychiatric issues. DISCUSSION It is challenging to diagnose a child with Bipolar Disorder. Children find it difficult to verbalize their feelings. Their symptoms can have different meanings based on their developmental levels. There is a high rate of comorbid psychiatric disorders with pediatric bipolar disorder (ADHD, Anxiety, substance use, ODD, Conduct Disorder, Autism, and OCD). Symptoms overlap with these comorbid conditions, making it hard to accurately diagnose Pediatric BPD. Statistics show for each year of untreated illness, bipolar youth have a 10% lower recovery rate. This indicates the importance of an accurate diagnosis and proper treatment of BPD early on in the disease process. CONCLUSION Pediatric Bipolar can be difficult to diagnose due to comorbidities as well as symptom presentation. Children are still developing their brains, especially the frontal cortex. The frontal cortex performs reasoning, planning, impulse control and judgement. Since teenagers are often still developing this area of their brains they have a higher tendency to be impulsive and make poor decisions, which are also diagnostically indicative of bipolar disorder. This makes it difficult to differentiate between normal teenage behavior and manic symptoms. The early recognition and maintenance treatment of BPD in children is of extreme importance to reduce psychosocial issues that can occur including social isolation, poor academic performance, and legal issues. Treatment includes family and school psychoeducation, family and individual therapy, and mood stabilizers (Lithium, antiepileptics, and antipsychotics).

No. 178

The Role of Laboratory Values in Medication-Induced Female Sexual Dysfunction in the Outpatient Setting

Poster Presenter: Aisha R. Mondal, M.D.

SUMMARY:

Patients with major depressive disorder or bipolar disorder have a high prevalence of sexual dysfunction, including lowered sexual desire, compared to the general population. Additionally, medications used to treat these conditions may further contribute to sexual dysfunction. Hormonal contraceptives and SSRIs are two classes of medications that may decrease sexual desire in women. The two patient cases presented reflect the potential utility in ordering specific hormonal lab values to aid in diagnosis and treatment of medication-induced sexual dysfunction. Each case features a female patient in her early 20's in a committed, long-term relationship, who after being treated with both an oral hormonal contraceptive and a SSRI, experienced a significant decrease in sexual desire. In both cases, the contraceptive and SSRI were started in close proximity to each other, making it difficult to distinguish from history alone the agent most likely contributing to the sexual dysfunction. The first patient had attempted tapering off SSRI through her PCP and switching to a transvaginal hormonal contraceptive through her OBGYN with worsening mood symptoms and no improvement in sexual desire before presenting to outpatient psychiatry for evaluation, prompting hormonal blood tests. Interpretation of results and response to recommendations will be discussed and compared to the management of the second patient. This presentation will demonstrate how to use laboratory values (TSH, testosterone, SHBG, prolactin, DHEA-S) can be incorporated into assessment and management of decreased sexual drive.

No. 179

Oncosexology and Psychiatry: A Portuguese Approach

Poster Presenter: Ana Luisa Almada
Lead Author: Filipa Henriques
Co-Author: Lúcia Monteiro

SUMMARY:

Background: Cancer diagnosis and its treatment can deeply compromise patient´s physical, psychological and social balance and functioning. One of the most affected areas are intimacy and sexual life. Studies show that about 59% to 79% of people with cancer have a significant decrease in sexual activity. Besides its huge prevalence, sexual problems or malfunctions are seldom screened or prevented. OncoSexology rose as a clinical and multidisciplinary discipline focused on understanding, screening, preventing and treating, as much as possible, the sexual side effects of cancer disease and its treatments, in order to improve sexuality and general quality of life of the patients and their partners. This work focuses on the role of psychiatry in Oncosexology Clinic, at Portuguese Institute of Oncology of Lisbon (IPO - Lisbon). Methods: It is a descriptive, observational and retrospective analysis of patients followed at the OncoSexology/Psychiatry Outpatient Clinic, in IPO - Lisbon, during 2016. The characterization focused in demographic (age, sex, race, marital and parental status), oncological (referrals, diagnosis and treatment), sexual (diagnosis and treatment) and other psychiatric factors (co-morbidities). Results: In 2016, 79 Oncosexology/Psychiatry appointments were carried out. A total of 45 patients were observed, 57,8% female (n = 26) and 42,2% male (n = 19), with an average age of 50 years. The majority of the patients were married (73.3%) and had children (68.9%). Majority of referrals came from Breast Clinic (n = 16, 35.6%). The most prevalent oncologic diagnoses were Breast cancer (n = 19, 42.2%) and Prostate cancer (n = 7, 15.6%). Most cancer treatments carried out were surgery (82.2%), radiotherapy (68.9%) and chemotherapy (62.2%). The mean gap time from cancer diagnosis to the first oncosexology appointment was approximately 2.5 years. The most prevalent sexual diagnoses were Genito-pelvic pain/penetration disorder (n = 18), Erectile disorder (n = 12) and Female sexual interest/arousal disorder (n = 12). Almost half of the patients had another concurrent psychiatric diagnosis (n = 21, 46.7%), mainly depressive disorder (57.1%). All patients received brief psychosexual interventions, including psychoeducation, support information, and symptom management. Other sexual specific interventions included vaginal rehabilitation with lubricants, moistures and digital massage (62%) and

selective phosphodiesterase-5 inhibitors (24.4%). Some patients also needed antidepressants (35.6%) and brief psychotherapy to improve coping strategies or marital life. Discussion/Conclusion: Our study is a descriptive characterization of the patients observed at Psychiatry in Oncosexology outpatient Clinic, in IPO – Lisbon, over 2016. Psychiatric disorders are common in Oncosexology Clinic. Psychiatric expertise is complementary, but essential in a multidisciplinary OncoSexology Clinic.

No. 180

Less Is More: Importance of Antidepressant Drug Interactions

Poster Presenter: Pratik Bahekar, M.B.B.S.

SUMMARY:

Buspirone is a partial 5HT1A agonist at the presynaptic hetero receptors and post-synaptic receptors modulating the increased release of serotonin. Buspirone is used to improve libido in those who have decreased libido due to use of psychotropic. We submit a case report; hyper sexuality with buspirone administration after several different trials. With Naranjo adverse drug scale score of 10 buspirone was “definitely: responsible for the side effect. Mr. X is 80-year-old male retired Airforce veteran with a previous history of Major Depressive Disorder, General Anxiety Disorder, and insomnia. The patient was diagnosed with stage IV Non-Hodgkin’s Lymphoma, drug induced cardiomyopathy and atrial fibrillation and was on polypharmacy for medical and psychiatric illness. He had limited symptoms relief with selective serotonin reuptake inhibitors, selective norepinephrine reuptake inhibitors, and mirtazapine. The patient was initiated on 5mg of buspirone and was titrated to 15mg, with a good clinical resolution of symptoms. However, with increasing doses of buspirone, Mr. X reported hypersexual thoughts and increased sexual drive. After three months of continued treatment, the patient began experiencing distressing obsessional hypersexual ideation. Of note, he reported no erections in the past three years and did not have intercourse in 40 years. Due to reported feeling guilty about his hypersexual thoughts, buspirone was slowly tapered off. Which resulted in a gradual decrease of hypersexual thoughts. After six months, Mr. X requested another trial of on buspirone as the medication helped relieve anxiety symptoms. Mr. X was restarted on buspirone 10mg daily which resulted in resurfacing of hypersexual thoughts. Buspirone is primarily metabolized by CYP2D6, CYP3A4, CYP3A5 and CYP3A7 cytochrome enzymes. Mr. A was on carvedilol, digoxin, flunisolide, glipizide, simvastatin, tamsulosin, torsemide, tramadol, Trazodone, Mirtazapine, & warfarin for his psychiatric problems and medical comorbidities. The medications which were metabolized by the same cytochrome enzymes had substrate-substrate interaction, inhibitor-substrate interaction and inhibitor-inducer-substrate interactions. Increase in the buspirone levels and may have contributed to the hyper sexuality. Authors acknowledge genetic variations are seen in the cytochrome enzymes functioning and no genetic studies were done in the patient. With no prior published case reports, we report for the first time that low to moderate use of buspirone causes hyper sexuality which is reversed of the drug depicting the causal relationship between the medication and symptoms. Thus, an association of hyper sexuality with buspirone is conceivable.

No. 181

WITHDRAWN

No. 182

CANTAB (Cambridge Neuropsychological Test Automated Battery) Reveals Impaired Sustained Attention in Offspring of Bipolar Parents and Healthy Controls

Poster Presenter: Ayesha Masood

SUMMARY:

Background: Bipolar disorder (BD) is mainly characterized by dramatic mood shifts due to the biased process of emotional information. An overlooked aspect of BD is the potential development of cognitive deficit amongst various cognitive domains that have influence on course of illness. We used Cambridge Neuropsychological Test Automated Battery (CANTAB) to analyze if group of Bipolar Offspring (BPO) shows any trait of deficit compared to healthy controls (HC). Methods: 26 participants (age 7-17 years inclusive; 10 bipolar offspring and 16 healthy controls) were enrolled

from an outpatient specialty mood disorders clinic. CANTAB cognition test battery was administered with desired modules. The rapid visual processing (RVP) task is a measure attention and psychomotor speed. We used post-hoc ANOVA to compare results of different cognitive tests between groups while adjusting for age and sex. Results: The RVP mean latency ($p = 0.321$) is significant between HC and BPO. Compared to HC, bipolar offspring have a longer response time therefore showing lower sustained attention span. Conclusion: Preliminary data reveals early evidence of cognitive function deficit in bipolar offspring group by means of lower sustained attention tendency when compared to HC. Impaired sustained attention can serve as a biological marker for prodromal diagnosis and improved prognosis. Further work is necessary to see the neural underpinnings of this tendency in bipolar offspring in order to improve prognosis of such individuals.

No. 183

Hormone Treatment in Transgender Patients and Mental Health

Poster Presenter: Gaurav Kumar, M.D.

SUMMARY:

Gender dysphoria is defined as the discomfort arising in some individuals from the incongruence between their gender identities and their external sexual anatomy at birth. Hormone replacement therapy for transgender individuals involves sex hormones or other hormonal medications which are administered to transgender individuals to synchronize their secondary sexual characteristics with their gender identity. However, adverse effects of long term hormone treatment and psychiatric outcomes in the transgender population have not been well studied. This case study focuses on a patient undergoing hormone replacement therapy and subsequently developing a manic episode, requiring hospitalization. Studies have shown that androgenic steroid use is associated with increased aggressiveness, heightened irritability, hyperactivity, changes in libido, and unprovoked violence. The risk of suicides seems to be increased in male-to-female patients, but appears to be similar to the general population in female-to-male patients undergoing hormone replacement therapy. Hormone therapy also appears to have a beneficial effect on depression. Management of patient's hormone treatment medications, as well as consideration of psychiatric medications to treat the patient's mental illness, while evaluating the overall risks and benefits of utilizing hormone replacement therapy for these individuals are discussed.

No. 184

Don't Call Me "He" OR "She": A Case Report on Prepubertal Gender Dysphoria

Poster Presenter: Lovejit Kaur, M.D.
Co-Author: Sourav Sengupta

SUMMARY:

Gender dysphoria in children is defined in the DSM-5 as a longstanding "marked incongruence between one's experienced/expressed gender and assigned gender." We intend to describe a case of prepubertal gender dysphoria and discuss clinical issues related to treatment. A 9-year-old Chinese female,adopted by Caucasian parents at the age of 10 months from China, presented for psychiatric evaluation. The patient has received mental health treatment since the age of 5 and has been diagnosed with attention-deficit/hyperactivity disorder, autism spectrum disorder, reactive attachment disorder, and generalized anxiety disorder. She has been tried on multiple stimulants and selective serotonin reuptake inhibitors in the past, however has not achieved remission of symptoms, due to being an ultra rapid metabolizer of CYP2D6. She is currently prescribed escitalopram and long-acting methylphenidate, and has had marked remission of her symptoms. The patient is currently enrolled in a social skill building group due to her history of autism spectrum disorder and limited ability to understand social cues. The patient first started to have discomfort with gender at the age of 6 years old and preferred to be called "He" instead of "She.". There were also time periods when the patient did not like to be identified as either gender. The patient began dressing as a male, including getting a short hair cut and choosing games traditionally played by boys. The patient preferred to play and identify with male peers. The patient preferred to be addressed by first name and the use of gendered pronouns would often lead to yelling and aggression. The patient would get into fights

with other children in school or summer camp due to the discomfort and anxiety experienced in anticipation of being judged because of a female appearance. Treatment of gender dysphoria in children can be challenging due to limited community resources and the stigma related to it. Collaboration with the school and therapist and parent psychoeducation play integral roles. The patient is working on the goals of exploring gender identity role and expression, alleviating internalized transphobia and promoting resilience. Psychotherapy is individualized varying on the emphasis on individual's needs and discomfort. Hormone therapy and surgery in prepubertal age is not well researched as there have been studies which describe some children and adolescents grow out of gender dysphoria due to social, environmental or sexual experiences and might experience remission of dysphoria. Exploring into gender constancy and gender identity role are most crucial tasks at this developmental stage.

No. 185

Coincidence or Correlation? A Genetic Anomaly and Gender Dysphoria in an Adolescent in Psychiatric Residential Treatment

Poster Presenter: M. M. Naveen, M.D.

SUMMARY:

Background/Objectives: GG is a transgender adolescent with gender dysphoria. This new term in DSM-5 is characterized by marked distress over the incongruence between one's birth and identified gender. GG also has a rare deletion on chromosome 6, specifically 6q14.1-14.2. To date, no studies note an association between chromosome 6q deletions and gender development. This report encourages readers to consider whether chromosome 6q deletions impact gender development and contribute to gender dysphoria. Methods: The authors of this abstract worked with GG in a residential treatment center over a period of 6 months. She was evaluated on a regular basis and received medication management. In addition to a thorough chart review, the authors spoke with GG's father and several treatment center staff, including nurses, social workers, clinical milieu managers, and mental health workers. Results: In addition to gender dysphoria, GG suffers from major depression and demonstrates several characteristic features of borderline personality disorder, most notably recurrent self-injury. This is consistent with results from a recently published study on the mental health disparity between transgender and cisgender adolescents, which notes a 2- to 3-fold increased risk for adverse mental health outcomes in transgender youth. A number of factors contribute to this, in particular peer bullying, social rejection, and a lack of family support. All of these are challenges faced by GG. Discussion: Clinicians should keep in mind that chromosome 6 deletions may influence gender development. Accordingly, an adolescent with gender dysphoria who has notably distinctive facial features, engages in recurrent self-injury, or manifests other symptoms of borderline personality disorder may warrant karyotype analysis to evaluate for such a deletion. To best establish and maintain a therapeutic relationship with gender nonconforming youth, it is important to eliminate bias and judgment and simply listen to and learn about what a youth is experiencing and feeling about his or her gender.

No. 186

Beyond the Gender Binary: A Trans Perspective From India

Poster Presenter: Nandini Murali

SUMMARY:

The Indic tradition is supportive of pluralities in gender and its diverse expressions across the gender spectrum. Represented in murals and stone carvings, the iconic form of Ardhanareeshwara (half woman and half-man) is one of the many instances of the validation of non-binary gender representations. In India, the community of trans women or male to female (m2f) trans persons, is popularly known as hijra, aravani or thirunangai. Although a highly visible gender minority, they are one of the most marginalized, ostracized and stigmatized gender minority people in the country. In current gender and diversity discourse, there has been a perceptible shift from the traditional binary notions of sex/gender to a spectrum model that recognizes the diversity, pluralities and fluidity of non binary sex and gender. The incongruence between the anatomical sex and gender identity is termed Gender Incongruence, or Trans Genderism and the resulting feelings of confusion, loneliness, anxiety, guilt and

shame are termed Gender Dysphoria. In India, trans gender is an umbrella term that includes a range of people with diverse gender identities and experiences and includes pre-operated effeminate or feminized men (kothis), postoperative trans gender women, and non-operated trans sexual people (both of whom identify with the gender that is diametrically the opposite of their biological sex), and cross dressers. A male to female (m2f) trans gender person is referred to as a trans woman, and a female to male (f2m) trans gender person as a trans man. The concept of gender binary or gender binarism is crucial to understand the social exclusion and vulnerabilities experienced by Trans Gendered individuals. The term describes a societal worldview that splits people into opposing male and female, sex and gender, masculine and feminine—all of which are seen as hierarchical, opposing and disconnected and compartmentalizes people into male and female gender roles, identities and attributes. People who are gender diverse are marginalized and thereby excluded because they do not conform to normative gender expectations and associated with one's biological sex.
Heteropatriarchy refers to the dominance of heterosexual males in society and is organized in such a way that the power endowed on men by patriarchy gets carried into heterosexual relationships. Transphobia refers to the widespread hatred and avoidance of Trans Gender people whose gender identity and experience are at variance with their biological sex. Ostracized their vulnerabilities are compounded by social institutions such as the family, school, law and work place. The presenter highlights the story of a resilient woman living life on her own terms, as a trans woman with dignity and courage as she weaves the aesthetic, political and ethical warp of the trans community into a narrative of hope and triumph.

No. 187

Psychiatric Challenges for the Transsexuals After Sex Reassignment Surgery

Poster Presenter: Syed Saleh Uddin, M.D.
Co-Author: Javeria Sahib Din

SUMMARY:

Psychiatric challenges for the transsexuals after sex reassignment surgery Syed Saleh Uddin M.D, Javeria Sahib Din M.D, Asghar Hossain M.D Abstract Background "Gender identity disorder of childhood" (GID) was recognized as a "disorder" in 1981. The word "transgender" is an umbrella term used for persons who do not identify into their assigned gender and hence challenge the customs of their gender. Transsexuals are individuals who desire to be surgically transformed, by a surgery known as sex reassignment surgery. Sex reassignment surgery (SRS) is performed in transsexuals to make their physical appearance according to their desired sex. Sometimes, those individuals who undergo SRS are referred to as trans sexed individuals. Method A prospective review will be used to study challenges faced by transgender psychiatric patients after sex reassignment surgery. Patients will be interviewed; electronic and paper charts will be reviewed. Available literature from PubMed is reviewed Objective Our goal is to highlight the factors involved in stabilization of transsexuals during and after sex reassignment study. Conclusion Variable results are available regarding the psychiatric morbidity associated with sex reassignment surgery i.e., the psychiatric challenges faced by the transsexuals after sex reassignment surgery. Improvement in psychological problems has been reported in many studies. But there is some psychiatric manifestation after sex reassignment surgery. Some of the conditions reported include regret, suicide attempts etc., after SRS. A meta-analysis study on the psychological outcomes after SRS reports that 80 percent of transsexuals improve in terms of quality of life and gender dysphoria. A Swedish study reports an increase in mortality, psychiatric inpatient hospitalizations and suicide rate after SRS. Higher criminal convictions have also been reported in female to male transsexuals. Increase in cardiovascular mortality and malignancies has also been observed after transformation. Sex reassigned individuals have reported friends and family as the greatest support factor after SRS. Surgeons and psychologists were also among persons from whom transsexuals were seeking psychological support. Sex reassigned individuals require a prolonged psychiatric care after SRS to prevent psychological decline. Literature review Gender identity is the term used to recognize a person as male or a female. It does not include only the appearance of genitalia, but it also comprises the innate desire and role as a

man or a woman, and as a girl or a boy. Similarly, the inability to psychologically accept the designated gender and its associated discomfort is termed as Gender dysphoria. The term sexual orientation does not depend on gender identity. Gender variance or gender nonconformity is characterized by having interests that are not in accordance with the cultural norms of the assigned gender. "Gender identity disorder of childhood" (GID) was recognized

No. 188

Gender Dysphoria (Gender Identity Disorder) as a Precipitator of Psychosis and Poor Prognosis in Schizophrenia: A Case Report

Poster Presenter: Muhammad Navaid Iqbal, M.D.
Co-Authors: Mehwish Hina, Ghulam Sajjad Khan, M.B.B.S., Ali Raza, Asghar Hossain, M.D.

SUMMARY:

Background: Schizophrenia and gender dysphoria are the two psychiatric disorders, which may mutually overlap or coexist with each other. Gender Dysphoria can be defined as distress experienced by the patient due to mismatch between biologic sex and gender identity. Early diagnosis and prompt treatment of gender dysphoria may prevent psychotic decompensation and prevent deterioration of functional status in patients. It is very imperative to manage the psychosocial stressors associated with gender dysphoria, which may culminate into various psychiatric disorders including schizophrenia. Untreated cases of gender identity disorder in context of schizophrenia have substantial impact on long term prognostic outcome. **Objective:** The primary objective of this case report is to emphasize the need to effectively manage gender dysphoria before it may give rise to any significant psychiatric illness like schizophrenia. This also highlights how coexistent schizophrenia and gender dysphoria impact long-term prognostic outcome. **Case:** We present a case of 20-year-old male to female transgender patient with past psychiatric history of schizophrenia who was admitted to our inpatient psychiatric unit secondary to worsening of her psychosis and suicide attempt. She had multiple inpatient hospitalizations due to her mental illness and also noncompliance to her medications. Patient started transitioning from male to female at age 16 years and started hormonal therapy. She started having psychotic and mood symptoms during her transitioning phase. Although patients gender change was well accepted by her family and friends, it became a significant precipitating factor in worsening of her mental illness and contributed to her poor functioning and quality of life. **Discussion:** In the present day world, gender dysphoria has increasingly shown predisposition to precipitation of psychosis. This has been supported by available literature and emphasize on numerous psychosocial stressors induced by social society, which ultimately affect patients experiencing gender dysphoria. Few case reports on coexistence of schizophrenia and gender dysphoria highlights the poor prognostic outcome because of its complexity and inadequate treatment. As seen in our reported case, patient's gender dysphoria was leading cause for psychotic decompensation and subsequently impinging on long-term prognosis. Researchers advocate strongly for effective management of gender dysphoria to prevent over burden of psychotic diseases for a healthier society; hence, emphasizing the significance of our case report. **Conclusion:** In light of this case report we recommend managing cases of gender dysphoria promptly and effectively before they culminate into a psychotic disorder. Inadequately treated cases may have adverse outcome and subsequently impacts future prognosis. We recommend further research in this regard to prevent overwhelming burden of psychotic illnesses in our society.

No. 189

Precipitation of Post-Physical Restrain Delirium

Poster Presenter: Muhammad Navaid Iqbal, M.D.
Co-Authors: Mehwish Hina, Naveed Butt, Asghar Hossain, M.D.

SUMMARY:

Physical restrain is one the treatment modality primarily used to manage agitated or aggressive behavior in psychiatric inpatient units and nursing homes. It's rationalized use prevents physical injuries to patients which they may sustain due to their behavioral outbursts if not promptly contained. There is wide array of etiologies of patient's aggressive behavior ranging from overt psychosis to deliberate self-injury due to suicidality. Restraining

on one hand is effective to prevent self-injury, but on contrary, may precipitate some complications due to variety of reasons. Delirium stands out as one of the common psychiatric manifestation patients may experience during post restrain phase. It can be defined as fluctuating sensorium with waxing and waning pattern, primarily affecting middle age and geriatric population in heath care setting; which could be either hyperactive, hypoactive or mixed type. Transient hypoxia to neurons seems to be the etiological factor in such cases, which partly attributes to co-existent acute medical comorbidities like congestive cardiac failure and chronic obstructive pulmonary disease. Physicians recommend monitoring for early signs of decompensation like hyperventilation, panic attacks, and persistent agitation while in physical restrains; as they tend to precipitate hypoxia culminating into acute delirium. Generally, physical restrains are used as last resort to contain behavior when intervention with chemical restrains remains unsuccessful or physical restrains imminent to prevent patient's physical injury. Close monitoring of post restrain status of patients is very imperative. It's highly advisable to adequately medicate such patients as persistence of aggressive and agitated behavior while in physical restrains may lead to infliction of overt physical injuries and prolong immobilization of extremities of patients post restrain. Considering the high rush of catecholamines in such patients due to their aggressive behavior, cautious use of short acting benzodiazepines along with antipsychotics in psychotic patients help to effectively manage patient's aggressive behavioral outbursts. While onset of delirium depends on multitude of factors; its early management and detection of subtle warning signs helps in effectively managing acute physically aggressive episodes without precipitating complications like delirium. Skilled interpersonal communication and frequent patient interaction of the physician also helps in reducing the time of physical restrain, which leads to less probability of any complications. In extreme cases, if delirium not managed promptly and effectively may led to death due to cardiovascular decompensation, which potentially can be avoided with collaborative team effort. This literature review emphasis upon the need to intervene in timely manner in cases of physical restrains to prevent complications of delirium in context of hypoxia or asphyxia.

No. 190

Case: Recent-Onset Psychosis in a 56-Year-Old Male

Poster Presenter: Jayson Takeji Masaki, M.D.

SUMMARY:

A 56-year-old single white male presented to inpatient psychiatry unit from a nursing home with progressive and rapid psychotic decompensation over the course of 1 year , with prominent worsening in the last 3 months as noted by 3 hospital readmissions for what appeared to be treatment resistant schizophrenia. Admission labs were significant for moderate pancytopenia, prompting a repeat CBC confirming pancytopenia. Follow-up testing for HIV screening and a CT head was done which showed positive HIV serology and imaging with impression of extensive white matter changes and generalized mild cerebral atrophy. HIV positive status was confirmed and testing for opportunistic infections was done to rule out any complicating medical factors. The patient was started on anti-retroviral therapy (in addition to antipsychotic olanzapine) and made a significant recovery as evidenced by no further psychiatric hospitalizations in the following 6 months. This is a case of Progressive Multifocal Leukoencephalopathy (PML), a rare and serious opportunistic brain disease caused by reactivation of latent John Cunningham virus (JCV) in immunocompromized individuals, most commonly seen in HIV/AIDS patients. Left untreated, rapid neurological deterioration and fatal progression ensues with most patients dying in a few months. Symptoms are variable, but often presentation is mistaken for psychiatric disorders due to cognitive impairment and psychosis. Since there is no specific treatment for JCV infection at this time, the clinical approach is addressing the underlying cause of immunosupression. In this case, initiating highly active antiretroviral therapy to treat HIV is the best therapeutic option, which may halt further progression of neurological damage and may reverse some psychiatric symptoms if such symptom pathology is due to inflammatory processes in the brain. Paradoxical transient worsening of symptoms during initial treatment may occur, which clinicians

should be aware of as it may cause undue alarm and questioning of therapeutic efficacy if not expected.

No. 191

Expanded Clinic-Based Mental Health Services: Association With HIV Viral Suppression

Poster Presenter: Raina Aggarwal, M.D.
Co-Authors: Kathleen McManus, Rebecca Dillingham

SUMMARY:

Background: The University of Virginia Ryan White HIV Clinic increased clinic-based mental health (MH) services including substance use counseling in 2013. The study objectives are to characterize the changing demographics of the people living with HIV (PLWH) who initiated MH care and to determine MH services' effects on HIV outcomes, specifically HIV viral suppression. Methods: The cohort included PLWH who received clinic-based MH services 2012-2014. Cohorts A and B initiated MH care before or during 2012 and during 2013-2014, respectively. Demographics were analyzed, and for Cohort B, viral suppression rates for pre- and post-MH care initiation were compared. Results: Cohort A (n=130) represents 19% of all 2012 clinic clients; Cohort B includes 182 subjects. By 2014, 41% of all clinic clients had established MH care. MH visits increased from 385 in 2012 to 941 in 2013 and 1,183 in 2014. Compared with Cohort A, Cohort B had almost three times the number of subjects with CD4 counts below 200 (p=0.02). 96% of Cohort A had been prescribed antiretroviral therapy (ART) before MH care initiation compared with 82% of Cohort B (p=0.009). About one-third of Cohort B had detectable viral loads compared to less than 20% of Cohort A (p=0.01). Cohort B received more substance use diagnoses in the year following MH care initiation compared to Cohort A (p=0.005). For those in Cohort B who had HIV viral loads in the year before and year after MH care initiation (n=170), 43% had detectable viral loads before establishing MH care. The viral suppression rates for Cohort B in the year before and after establishing MH were 57% and 87%, respectively (p<0.001). Conclusions: PLWH who gained access to MH services in 2013-2014 had lower CD4 counts. They were more likely to not be prescribed ART and to have a detectable viral load. Importantly, initiation of MH services was associated with increased rates of viral suppression. Increased access to co-located MH and substance use services helped high risk PLWH achieve optimal HIV outcomes.

No. 192

Level of Experience and Attitudes Toward the Use of Physical Restraints of Acute Psychiatric Inpatients

Poster Presenter: Michael A. Landolfi

SUMMARY:

Background: For the past two and a half centuries, physical restraints have been a common modality used for intervening with aggressive or self-injurious behaviors in patients Behavioral health staff, including Registered Nurses (RN), Behavioral Health Technicians (BHT), and physicians utilize restraints on a routine basis in the inpatient psychiatric setting. **Objective:** This study will investigate whether the level of experience of behavioral health staff in an acute inpatient setting, the designated independent variable, has a significant impact on the attitudes toward patient restraint, the dependent variable. The level of experience will be measured by the following sub-variables: number of facilities in which they have worked, the number of restraint situations in which they were involved, level of training, and injuries sustained during past restraint situations. The sub-variables measuring the attitudes toward patient restraint include: emotional preparedness for first and current restraints, belief that alternative techniques might have been utilized, level of empowerment in voicing concerns that alternative techniques could have been utilized, and belief in whether restraints should employed under any circumstance. **Methods:** The data for the study was collected through an anonymous questionnaire that was distributed utilizing an on-line survey engine. The survey was sent to the behavioral health staff at a 220-bed acute, involuntary psychiatric inpatient program. **Results:** The survey was distributed to 410 recipients, a sample size composed of 122 respondents, for a completion rate of approximately 30%. Of the responders, 32.8% were RN's, 47.5% were BHT's, and 19.7% were physicians. An employed ANOVA analysis revealed that the only significant sub-variables measuring the level of experience, with their corresponding p-values, were: number of restraints in the past 30 days (0.014),

level of training (0.046), and level of impact from personal injuries in previous restraints (0.031). Likewise, the only significant sub-variable measuring the attitudes toward patient restraint was the belief that alternative techniques, other than restraints, could have been initiated (0.032). **Conclusion:** The survey demonstrated that the level of experience of behavioral health staff correlated with a belief that in alternative techniques, to manage patient behaviors, could have been employed rather than restraints. This suggests that there may be a negative attitude toward patient restraint. A future study might be undertaken to assess the relationship between the attitudes of behavioral staff toward less restrictive interventions such as body wraps, mittens, involuntary medication administration, and seclusion. The anticipated varying attitudes toward these techniques is based on the level of personal risk in utilizing these techniques and a maturation of one's skills in interacting with patients in avoiding escalating a patient's behavior.

No. 193

Clinical Kynanthropy: Case Formulation and Brief Literature Review

Poster Presenter: Eduardo J. Rodriguez-Perez, M.D.

SUMMARY:

INTRODUCTION Zoanthropy is a rare delusion that one has been or can be changed into an animal form. Herein is discussed the case of a man who believes that he is possessed by a spirit that overcomes him and changes him physically into a dog. This is followed by a review of clinical features of zoanthropies, historical perspectives of human-animal transformations, and a discussion surrounding possible psychological underpinnings of animalistic behaviors. CASE The patient was 54 year-old man, with a history of psychosis, also a registered sex offender due to sexual misconduct with a minor, with several presentations to our Psychiatric Emergency Service (PES) due to paranoid ideation, agitation, and disorganized behavior, generally occurring in response to social stressors. He additionally reported auditory hallucinations and depressive symptoms. During multiple evaluations, the patient would fall to the ground, gritting his teeth, growling, barking, and panting like a dog. He attributed his behavior to being possessed by the spirit of a dog. The patient refused medications due to his delusional constructs. The behavior persisted during outpatient follow up, occurring regularly in psychotherapy sessions, in reaction to topics such as his legal status and his cannabis use. DISCUSSION Kynanthropy is a delusional belief that a person can transform into a dog or dog-like animal. Cases of clinical zoanthropy are rare and occur mainly in people with a primary psychiatric disorder. The animal involved is variable depending on the geographic location and cultural significance of the animal. Changes into an animal form feature prominently across history and across cultures. References appear in Greek and Roman mythology. Descriptions by Byzantine physicians appear in the fourth century. In the Middle Ages it became a symbol of demonic possession or witchcraft. Several authors have explored animalistic behavior representing an external expression of primitive drives that have been split off and assume an animal form. Authors have framed zoanthropies as displays of suppressed emotions. CONCLUSIONS We present a case of a 54 year-old man with clinical kynanthropy most consistent with Schizoaffective Disorder. Initial suspicion of a factitious disorder gave way due to his persistent delusions and disorganized behavior. The patient's difficulties with emotional expression and the situational nature of his dog-like behavior lend themselves to an interpretation related to a representation of un-channeled aggression. His behavior could also serve as a manifestation of guilt related to his paraphilic desires and legal history. He additionally had a tendency to split and had difficulty integrating his ability to have both loving and aggressive emotions. This case highlights the potential role of psychodynamic formulation in gaining a better understanding of our patients with psychotic disorders, and ultimately improving patient care.

No. 194

Integrated Behavioral Health Care: A Global Approach

Poster Presenter: Houssam Raai, M.D.
Co-Authors: Elizabeth L. Chapman, M.D., Lan Chi Le Vo, M.D., Vivian Blotnick Pender, M.D., Pamela Carolina Montano, M.D.

SUMMARY:

Mental disorders are common worldwide and can be significantly disabling, affecting various aspects of people's lives. Although they are to some extent invisible disabilities, the World Health Organization ranks anxiety and depression among the most disabling conditions in terms of Years Lived with Disability (YLD), leading to high health care costs and significant loss of productivity. Meanwhile there is a large gap in psychiatric care. In the United States, for example, only one in five adults with mental illness receives specialist treatment, with up to 60% of psychiatric care provided by Primary Care Physicians (PCPs). The traditional system of care is fragmented and inefficient. Integrated Care models, which are being increasingly used to address both medical and behavioral health conditions, attempt to bridge this gap. Integrated Behavioral Health models place mental health providers in primary care settings, with PCPs treating common mental disorders with support from case managers and psychiatrists. With the global shortage of mental health providers and the stigma accompanying psychiatric disorders, Integrated Care enables improved screening and treatment rates, while reducing health care costs. Some Integrated Care models are leveraging technology to extend the reach of services and enhance patient awareness, understanding of and adherence to treatment. The American Psychiatric Association (APA) recognizes the importance of Integrated Care in enhancing awareness of psychiatry and psychiatric care and maximizing treatment resources at an international level. The APA supported a panel presentation to introduce the topic of Integrated Behavioral Health Care to the international community, at the Conference of State Parties at the United Nations (UN) in June 2017. This symposium builds on that presentation by first describing Integrated Care models currently implemented in New York City, including in low resource and transcultural settings. We will then discuss the applicability of Integrated Behavioral Health models in a global context. The APA's presence at the UN resulted in an initiative to organize a program to help providers in Afghanistan to better recognize and manage mental disorders. The final part of our presentation will outline that initiative and discuss future directions for APA partnerships to advance Global Mental Health. As our experience shows, Integrated Care models are proving to be successful and cost-effective in bridging the gap in treatment of mental disorders in the United States, and are emerging as a leading example to different countries working to provide a more inclusive approach to psychiatric care.

No. 195
WITHDRAWN

No. 196
Disrupting the Space Between Psychiatry and Public Health: A Case of Hoarding in Homelessness
Poster Presenter: Karen Lai, M.D., M.P.H.

SUMMARY:
Of the many national and international public health concerns, homelessness continues to pose a significant and complex problem, without easy solutions. Nationwide, serious mental illness is estimated in 20-33% of the homeless population, with up to 67% lifetime incidence. Those struggling with mental health issues are the most vulnerable and yet least likely homeless subgroup to connect with ambulatory care centers and providers. One particularly evocative example of the failure of systems of care in addressing mental illness in homelessness is with hoarding disorder, thought to affect 2-6% of the population. It is a difficult-to-treat disorder with variable insight, typically accompanied by psychiatric and medical comorbidities, and oftentimes leading to public health and safety hazards. Hoarding's incidence, severity, and treatment within the homeless population are poorly studied and understood. A brief Pubmed and online search of "hoarding" and "homelessness" reveals only one unpublished pilot study surveying hoarding rates among the homeless. Within the population surveyed, ~21% reported hoarding symptoms, and 8% viewed hoarding as a main cause of their homelessness. Given the modest response of hoarding to known treatment, an intervention set in the more complicated context of homelessness and competing priorities for intervention will require more than simply medication management. The condition of homelessness, which predisposes to a saving for survival mentality, may itself strengthen hoarding tendencies and complicate hoarding interventions. A case of a homeless woman with hoarding disorder illustrates the medicopsychosocial

complexities involved, an application of a patient-centered treatment model, and its failures. Like many hoarders, Ms. C struggled with psychiatric, medical, and social comorbidities – depression, substance use, hypothyroidism, obesity, homelessness, trauma, and isolation from family. She sought psychiatric help, but without interdisciplinary coordination (medical services, communication), individual problems, unaddressed, became emergent ones, leading ultimately to hospitalization for a myocardial infarction. Though her hoarding contributed to this outcome, her and providers' awareness and treatment of the condition were delayed by a multitude of other priorities, not least homelessness. Hoarding disorder is poorly understood and understudied, especially when situated within homelessness. And yet these two conditions, each an important potential cause of the other, suggest bidirectional effects that emphasize their psychiatric, public health, economic, and social impacts, thus deserving further study. Resulting innovations in care will require systems-wide changes, such as: better-coordinated care transitions for phased hoarding interventions; collaborative learning between providers and levels of care; interdisciplinary provider training; and financing aligned with a culture focused on systems of care.

No. 197

Practice-Based Evidence: Novel Attempts to Meet the Needs of a Developing Country

Poster Presenter: Nagesh Brahmavar Pai, M.D.
Co-Author: Virupaksha Devaramane

SUMMARY:

Development of alternative methods for provision of accessible, community-based services for people with mental illness in resource poor countries is a global public health priority.Hence, designed on a needs-led basis rather than on a service-led basis. Keeping in mind, barriers to access include stigma and discrimination; low awareness of available services; a lack of well-organized primary mental health care, inadequate mental health training of primary health care staff; and poor identification of cases in the community we planned interventions intended to improve mental health may be better provided from outside health services. In addition to providing diagnostic reviews and pharmacological interventions provision of Psychoeducational information for participants and caregivers, adherence management strategies and strategies of health promotion to address physical health problems in participants are the priorities of these interventions. By establishing networks with community agencies to address social issues, these clinics aimed to help with social inclusion and employment opportunities. Our experiences have both strong internal validity and are potentially generalizable to other resource poor settings.

No. 198

Increasing Access to Psychiatric Services: Introducing a Collaborative Care Model of Training to Psychiatry Residents

Poster Presenter: Natalia Miles, M.D.

SUMMARY:

The demand for access to mental health services in the United States far exceeds the amount of mental health care providers currently available. Far more patients with these needs are being seen in hospital and primary care settings than in mental health clinics. There are various reasons for this, be it wait time to see providers, unavailability of providers in rural areas, or stigma attached to visiting mental health clinics. This is a tremendously important issue as the landscape of health care delivery evolves. Physicians are more and more becoming part of multidisciplinary teams. It is becoming ever important for young psychiatrists, in particular, to understand how to navigate new and innovative roles within integrated clinical practices. At the University of Rochester Medical Center myself and other residents saw just how integral a part of our future clinical practice Integrative Care will be, and endeavored to create opportunities to these cultivate skills in our clinical training. We created a pilot program during which 3rd year residents became onsite consultants to primary care residents and attendings in a variety of university affiliated clinics. This lead to increased collaboration between the specialties, broadening of psychiatric knowledge base within the primary care residents, and improvement in their reported comfort managing psychiatric patients and optimizing delivery of treatment. After our success, the rotation was incorporated into the core 3nd year clinical

rotations, with the option for continued exposure during elective time in 4rd year.

No. 199

Recurrent Amphetamine-Induced Psychotic Disorder: A Case of Underutilization of the Prescription Drug Monitoring Program

Poster Presenter: Santosh Ghimire, M.B.B.S.
Co-Authors: Michael Esang, MB.Ch.B., M.P.H., Junaid Kausar Mirza, Sharon Lowe

SUMMARY:
Stimulant-induced psychosis is not uncommon, and among individuals who use methamphetamine, the prevalence of psychotic symptoms has been estimated at 40%1. The CDC continues to cite prescription drug monitoring programs (PDMPs) as highly useful public health tools in prescriber decision-making2. Unfortunately use of PDMPs have been found to vary widely among clinicians, and is particularly poor among short-term prescribers3. To illustrate this finding, we present a case of recurrent amphetamine-induced psychotic disorder. Ms. V. is a 35-year-old divorced White female, a full-time nursing student, with a past history of Bipolar Disorder, Cocaine Use Disorder (in remission), and Cannabinoid Use Disorder, who was brought to our Psychiatric Emergency Department (ED) a second time in one month. She presented with symptoms of psychosis after taking an unknown number of Amphetamine/Dextroamphetamine extended-release (ER) capsules. She was admitted to inpatient Psychiatry where she continued to exhibit disorganized speech and behavior. She harbored delusions that everyone was against her; that her father had tried to rape and kill her; and that she was pregnant, wetting her bed with water and stating that she was in labor. Started on Risperidone, she responded to medication titration and was subsequently free of psychotic symptoms. Further investigation revealed that she had presented to a new Neurologist following her previous discharge from inpatient Psychiatry. She had described symptoms suggestive of ADHD to the Neurologist and had received another prescription for Amphetamine/Dextroamphetamine ER capsules from this new provider. She was discharged home to follow up at an outpatient Mental Health clinic. Historically, Ms. V. was admitted to inpatient Psychiatry at our hospital a month prior to the index presentation. During that admission, she had also exhibited disorganized speech and behavior, but with a single delusion. She had been abusing Amphetamine/Dextroamphetamine capsules (prescribed by her primary medical doctor) for a year before becoming hospitalized. Her second admission, however, was marked by a more severe psychotic episode and a longer duration of stay. The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition criteria for the diagnosis of ADHD has become more inclusive with the extension of the age cut-off for initial symptoms from 7 to 12 years4. Consequently, diagnosis of ADHD has increased in recent years5. Use of a PDMP is therefore of paramount importance for the safe prescription of psychostimulants, particularly for patients with a history of substance use, as in the index case.

No. 200

An Evaluation of Patient Follow-Up Visit Correlations of Psychiatric and Primary Care Appointments

Poster Presenter: Vipan Kumar, M.D.
Co-Author: Christopher R. Smith, M.D.

SUMMARY:
Objective: The objective of this project include: 1) to evaluate the correlation between follow up compliance in psychiatric and primary care clinical care 2) to detect if patients with poor psychiatric follow up corresponds with poor primary appointment follow-up. Method: The patient sample was collected from the outpatient log of two second year psychiatry residents at Grady Behavioral Heath Outpatient Clinic, who were seen in January 2017. Information that was collected and included the following: 1) Identifying if two or more consecutive psychiatry follow up appointments were missed, 2) Identifying if patients included in the sample attended and/or missed one or more primary care appointments from January 2016- January 2017 3) Identifying the location of the sampled patient's primary care appointments. Patient locations were marked as either Grady [including both inpatient and outpatient locations within the Grady Hospital System network] or Non-Grady, defined as any hospital/primary care facility outside of the Grady

Hospital System network. All of the patient information was collected from Epic electronic health record system. Results: Of the 62 total patients included in the study, 25 (40%) missed 2 consecutive psychiatric appointments at least once during the period under review. Of these 25 patients, 13 (52%) did not have documented evidence of a primary care follow-up. With further analysis of the 13 patients without primary care follow-up and having missed 2 consecutive psychiatric appointments during the period under review, 9 (69%) were found to not have received primary care services within the Grady Hospital System. Of the 62 patient sample, 18 (29%) were either not connected to primary care services within the Grady Hospital System or did not have any primary care appointment per chart review. Of the 62 total patients included in this study, 37 (60%) did not miss more than two consecutive psychiatry appointments. Of these 37 patients, 11 (30%) did not have documented evidence of primary care follow-up. Of these 11 patients who did not miss more than two consecutive psychiatric appointments during the period under review and had no documented evidence of primary care follow-up, 9 (82%), were found to not have received primary care services within the Grady Hospital System. Overall, of the 24 total patients that were not connected to primary care within the Grady Hospital System, 18 (75%) did not have documented evidence of primary care during the period of time reviewed. Conclusion: This project shows that patients who are seen in Grady Behavioral health clinic have low rates of primary care follow-up if they are not connected with Grady outpatient clinic, as 18 of the 24 total patients not seen within the Grady Hospital System had no documented evidence of primary care from January 2016 to January 2017.

No. 201

Challenges to Produce Estimates of Depression in a Subnational Global Burden of Disease Study in Brazil (GBD 2015)

Poster Presenter: Ana Paula Melo
Co-Author: Cecília Bonadiman

SUMMARY:

Background: The development of consistent high-quality epidemiological surveys is a challenge for research in low- and middle-income countries. Brazil joined the GBD network for the first time to produce the estimates of the burden of disease at the subnational level in 2015. As Brazil is a continental country with cultural diversity, the estimates of depression conducted in urbanized areas and in the southeast and south regions do not represent the entire country. The objective was to compare the estimates of the subnational GBD 2015 to the latest Brazilian National Household Sample Survey (PNS). Methods: Descriptive study of the burden of depressive disorders in Brazil, using prevalence estimates from the subnational Global Burden of Disease Study 2015 and the public database of a Brazilian household-based nationwide survey, which comprises 60,202 adults, aged 18 years or older, selected through the Patient Health Questionnaire-9 (PHQ-9) algorithm, which uses diagnostic criteria for depression. Results: The Brazilian prevalence of depression estimated from GBD 2015 was 5.5 (95% II 5.3; 5.7). Globally, Brazil is among the 10 countries with the highest prevalence in America, surpassed only by the USA (5.59 95% II 5.39-5.76). Homogeneity of the data on depression was found in the subnational GBD 2015 in all the 27 Federated Units (FU). The FU with the lowest estimates was Rio de Janeiro (5.2%) and with the highest Rio Grande do Sul (5.7%). In contrast, the latest Brazilian household-based nationwide survey (PNS) found a lower Brazilian prevalence of depression of 4.1% (95% CI: 3.8–4.4%). Besides, it was evaluated some heterogeneity between the estimates of depression across the 27 UF varying from 2.2% in Para to 5.9% in Pernambuco. Conclusion: The latest Brazilian household-based nationwide survey (PNS) was the first epidemiological survey to introduce an accurate depression estimative for the entire country. High heterogeneity and lower prevalence were found across estimates of depression in UF at PNS and it was similar to other studies conducted worldwide. In contrast, the results of the GBD 2015 indicated almost homogeneous estimates across the UFs. The GBD 2015 was estimated based on the data available, which traditionally tended to be performed in urbanized areas and in richer regions. Brazil has a challenge to continue implemented general population surveys that estimate the prevalence of mental disorders besides depression. In order to advance Brazilian public health initiatives,

the GBD 2016 may use the PNS database to help clarify the differences among the burden of depression in Brazilian FU. Brazil has experienced a process of changing the population's profile of illness and death, with an increase in non-communicable chronic diseases such as mental health disorders. These data may contribute greatly to a better understanding of how depression and other mental disorders occur across Brazil and in the world.

No. 202

An Evaluation of Empathy Within a Psychiatry Residency Training Program in Macedonia

Poster Presenter: James N. Kimball, M.D.
Co-Authors: Miloš Milutinovic, M.D., Suada Elezi, Emilija Spasikj

SUMMARY:
Despite evidence for the centrality of doctor–patient relationships in effective psychiatric treatment, the current research paradigm of psychiatry has paid limited attention to the role of empathetic human understanding in routine psychiatric treatment, including effective methods or techniques for working empathetically with psychiatric patients in routine practice. Psychiatry has faced significant criticism in the lay media and psychiatric literature for excessive dependence upon the DSM and medications while disregarding empathetic, humanistic interventions. Helping those with mental illness involves use of empathetic skills throughout practice, especially when mental health disorders directly interfere with individuals' willingness to seek help, ability to form trusting relationships or their ability to communicate logically and emotionally with others. In spite of the evidence for the importance of these aspects of psychiatric treatment, there has been little recent discourse in the psychiatric literature about how empathy can be effectively used in the day-to-day practice of clinical psychiatry. The Helpful Responses Questionnaire (HRQ) is designed to measure the development of reflective listening and empathy skills. These skills are central to the implementation of motivational interviewing in mental health, addiction and social service settings. . These skills are central to the implementation of motivational interviewing in mental health, addiction and social service settings. This instrument demonstrates strong potential for use as a tool that measure self-effectiveness of motivational interviewing addressing client and patient behavior change across multiple healthcare settings. While other validated empathy questionnaires exist, the HRQ is unique in that the respondent is required to provide freeform answers, as opposed to answering on a Likert scale. There are limited studies of the HRQ, particularly in psychiatry residents. There does not appear to be any measure of empathy in the Balkan region of Europe. There is one psychiatry residency program within the county of Macedonia. The current study is designed to evaluate the empathy skills of psychiatry residents in this country of 2 million people. Methods. Psychiatry residents at the University clinic in Skopje, Macedonia were surveyed in the Macedonian language. The HRQ was translated into the Macedonian language by English proficient psychiatric residents, Results: 21 out of 23 residents responded to the questionnaire. Results are: HRQ average score 1 1.42 2 1.23 3 1.38 4 1.23 5 1.14 6 1.47 Conclusion: It was noted that empathy was not correlated with year of training. Given that an increase in empathy has been associated with an increase in treatment compliance and effectiveness as well as a reduction in physician burnout, future research would involve specific training modalities to determine their effect among psychiatric residents in Macedonia.

No. 203

30 Years of a Balint Group in a Brazilian Teaching Hospital: Experiences, Trends, and Perspectives

Poster Presenter: Juliano Victor Luna, M.D.
Co-Author: Gilda Kelner

SUMMARY:
Balint group work is a form of clinical reflective practice that uses group discussion to develop a deeper understanding of the doctor–patient encounter. They were named after the psychiatrist and psychoanalyst Michael Balint, who led groups of general practitioners (GPs) at London's Tavistock Clinic, starting in the 1950s. Being in a Balint can be a unique learning experience both for psychiatry trainees and for practising psychiatrists, who may have a potential role as Balint group leaders. In many countries, Balint Groups are mandatory activities of medical residency programs, mainly for

GP and psychiatry. In Brazil, Balint movement didn't spread as we would hope. Nevertheless, some islands were built, and in Recife, one of Brazil's largest medical center, Balint Group works have flourished. We present our experience of a multidisciplinary Balint Group which is being held for the past thirty years, without interruptions, in a Tertiary Brazilian Teaching Hospital. The group was originaly part of the internal medicine department, but the interaction with the mental health department over the years has shifted it's direction, and the group has been mandatory in our Psychiatry residency curriculum since 2009. To our notice, there are no reported Balint groups in continuous activity for that long. Our group takes place every Tuesday from 10:30 to 12 AM. Participants are first-year psychiatry residents, second year psychiatry residents and attending mental health professionals(one psychiatrist and two psychoanalysts) who are also clinical supervisors of the residency program. The group coordinator is also the creator of the group and is a Physician and trained psychoanalyst who brought the Balint experience from England, where she performed a clinical rotation in a Balint group. For the past thirty years, the group dynamics remains pretty much the same, with some technical adaptations from a mainly medical to a mental health pool of participants. The keystones of our group maintains Balint's original tradition, and aim to reflect on: 1 –transference; 2 – countertransference; 3 - institutional transference of the patient and the professional; 4 - countertransference for the patient and the professional; 5 - institutional trajectories of the patient and the professional. Several generations of physicians have been able to get in touch with their feelings toward patient encounter and we believe that the opportunity of enrolling this activity has been a differential among psychiatry residency programs in Brazil. Our aim is to promote Balint's work and to lift some barriers that may explain why these movement hasn't spread in our country.

No. 204

Sexual Health Knowledge Lacking in Undergraduate Medical Education: A National Survey

Poster Presenter: Christina Warner

SUMMARY:

Only half of U.S. medical schools require formal instruction in sexuality and sexual health knowledge is severely underrepresented on formal licensing exams. Furthermore no comprehensive survey exists evaluating sexual health literacy amongst US medical students. This study sought to quantify the sexual health knowledge of undergraduate medical students using a 32 question online survey distributed electronically to representatives from all MD and DO granting medical schools in the United States. Knowledge was evaluated across five domains: Sexual Function & Dysfunction, Fertility & Reproduction, Sexuality Across the Lifespan, Sexual Minority (LGBTQIA) Health, Society, Culture & Behavior, as well as Safety & Prevention. Survey respondents (n=994) scored an average of 65.65% correct (19.7/30). Overall, students scored lowest on questions regarding safety and prevention (x=49.05%) and highest on questions regarding sexual function and dysfunction (x=72.96%). Higher knowledge scores were associated with medical school year (p=0.0001), race (p=0.0005), sexual orientation (p=0.0001), religion (p=0.0055), future medical specialty choice (p=0.0276), type of medical school program (MD vs. DO) (p=0.001), and medical school sexual health education courses (p=0.0137). Significant advances must be made in medical school sexual health curricula to combat increasing rates of sexually transmitted disease, health disparities, and sexual dysfunction in America. Further applications of this research include medical education curriculum development and health advocacy.

No. 205

Exploring the Interface Between Experience of Microaggressions and Mental Well-Being in Young Adults of Color in the Dorchester, Mattapan, and Roxbury Neighborhoods of Boston

Poster Presenter: Brandon C. Newsome, M.D.

SUMMARY:

Background: A myriad of studies have found that black communities have poorer mental health outcomes when compared to their white counterparts. However, less evidence prove the effect of microaggressions on mental health outcomes. This marginalization could impose adverse influence upon their mental health. Without culturally-adaptive care, mental health issues can

result in problems including social isolation, impaired functioning, and poor participation in social recovery. While this ethic population is likely to experience mental health issues, they are even less likely to access care that is available. Aim: To understand how microaggression can play a role in the mental health of this participation by obtaining community feedback on the nature of mental health issues, experience of racial discrimination, and experiences with policing in black male young adults in Boston. Methods: This is a mixed method qualitative study of 60 young adult black males aging between 18 and 30. The needs assessment will use qualitative interviews and quantitative assessments to systematically identify the nature of mental health issues in this population. Data collected will be analyzed from notes, recordings, and the transcripts of the interviews. The analysis plan is centered on community members' perspectives on the magnitude of mental health issues Within each of the domains, the investigators will draw comparisons, looking for overlap and differences, themes and trends. In addition, the investigator will continually look for newly emerging topics and patterns. Results: This study is in the preliminary stage. The needs assessment will ultimately identify the coping strategies existing among African Americans and be used to design culturally-sensitive interventions. Discussion: Further outcome research is recommended to inform future training and education initiatives, provide key information to stakeholders in the greater area, and lay the groundwork for future programming.

No. 206

Increasing Engagement in Depression Care by Chinese Americans Through a Customized and Culturally Relevant Smartphone Platform

Poster Presenter: Emily Y. Wu, M.D.
Co-Author: John Torous, M.D.

SUMMARY:

Background: Increasingly researchers have been evaluating the causes and correlates of health outcomes, such as depression among Asian Americans. Depression among Asian Americans is associated with various acculturative stressors. Although some studies found Asian Americans exhibit a lower rate of depression compared to the US general population, it is important to note that there is a lack of culturally-sensitive approaches towards evaluating depressive symptoms among Asian Americans.. Moreover, many Asian Americans are not aware of local mental health services, nor able to access services due to economic and geographic limitations. Currently, little research has addressed how to optimize communication strategies for ensuring access to mental health care for Asians from lower socioeconomic background. As smartphone technology has become ubiquitous in the U.S. society, recent research indicates there is a high rate of smartphone ownership and medical apps use among ethnic minorities. Although the actual effectiveness of medical apps is largely unknown, emerging data has shown interest and feasibility of utilizing smartphone apps to reduce health disparities and improve engagement with the health care system among low-income minorities. Objectives: This is a pilot study to evaluate the feasibility of using a smartphone application featuring culturally-validated Chinese Bilingual version of the Patient Health Questionnaire (CB-PHQ-9) and Tai-Chi mindfulness intervention among Chinese American with depression. We hypothesize that Chinese American outpatients will be able to download the app to their personal smartphone and use it for 30 days. We further hypothesize that the culturally-customized screening tool and mindfulness intervention delivered through smartphone app will increase the engagement to seek depression treatment among Chinese Americans. Methods: A total of 25 participants will be recruited from outpatient psychiatry and primary care clinics at Beth Israel Deaconess Medical Center (BIDMC) located in Boston, Massachusetts. Eligibility requirements include Chinese ethnicity, fluency in either English or Mandarin Chinese, and a baseline score of 10 or higher on the PHQ-9. Participants will be instructed to use the Tai-Chi mindfulness exercise and then complete the CB-PHQ-9 once a day during a 30-day period. At the 30th day follow-up visit, a 10-minute semi-structure verbal interview and a written survey containing the System Usability Scale (SUS) will be administered to each participant to collect user feedback. The data of daily app login, CB-PHQ-9 scores, and self-reported physical location will be automatically recorded by the app. Results and Conclusion: Final results will be available by the

time of the APA annual meeting. The IRB of this pilot study is currently under review at BIDMC.

No. 207
Health Professional Students as Providers of Behavioral Health Services to Uninsured Immigrants
Poster Presenter: Juan G. Rodriguez-Guzman

SUMMARY:
Introduction: Using the principles of lay counseling, health professional students were trained to deliver psychosocial educational interventions and administer substance use screenings to uninsured monolingual Spanish-speaking Latino immigrants with symptomatic depression and/or substance use disorders. Methods: Mental health professionals trained bilingual students in lay counseling principles. Patients enrolled in the Behavioral Health Program for Depression (BHP-D) were assessed with the PHQ-9 for changes in depressive symptoms. Clinic patients were screened for substance use with the Screening, Brief Intervention and Referral to Treatment (SBIRT), an evidence-based protocol. Results: For the Behavioral Health Program for Depression (BHP-D), twenty-five patients enrolled in the program, 68% female, mean age 39 years (SD = 12). Eighteen patients completed the program. PHQ-9 data were available from the 15 individuals who completed the program, among whom the mean baseline score was 11.7 (SD = 6.2) and mean final score was 4.6 (SD = 4.2) ($p < 0.001$). For the Screening, Brief Intervention and Referral to Treatment (SBIRT), a total of 199 patients were screened for multiple substances. Main countries of origin among the patients were Ecuador (40%), Mexico (38%) and Guatemala (10%.) Patients who scored for 'Moderate' risk screened in this category for the following substances: 70% tobacco use, 30% alcohol use, 9% cannabis use,4% cocaine use. Only one patient scored in the 'high risk' range. None of the patients reported ever using amphetamine-type stimulants, sedatives (benzodiazepines), inhalants, opioids, or any non-prescribed injectable drugs. Conclusions: This student-run behavioral health program serves as a model for rational task shifting and for expanding access to mental health services to undocumented immigrants. Lay counselor approaches may help to address mental health disparities in low-resource settings in high to middle-income countries. Given the restricted access to healthcare among uninsured first generation Latino immigrants, greater understanding of factors promoting substance use, cultural perceptions of use, and treatment preferences, could prove significant in reducing disparities.

No. 208
Spirituality Versus Hyper-Religiosity: A Complex Case of Misdiagnosed Psychosis
Poster Presenter: Miguel Angel Serrano, M.D.
Co-Author: Laura Francesca Marrone, M.D.

SUMMARY:
In Rosenhan's well-known experiment and article titled "On being sane in insane places," he examines the validity of psychiatric diagnosis and asks, "How do we know precisely what constitutes 'normality' or mental illness?"(1) Evaluation of first episode psychosis remains challenging amidst an ever growing appreciation of diverse cultures, ethnicities, and religious practices. Here we present the case of a 29 year old high-functioning African American male active duty service member who identified as Pentecostal, was questioning his identity, and had no previous psychiatric history. At presentation, clinicians noted that he exhibited negative symptoms, hyper-religiosity, delusional beliefs, and hallucinations. Additionally, his presentation was confounded by a presumed diagnosis of delirium secondary to hypernatremia, acute kidney injury, and encephalopathy as a result of a fasting ritual, which was a likely contributing factor but was initially overlooked. Despite his initial reluctance, he was treated with antipsychotics and discharged from psychiatric hospitalization with a diagnosis of Unspecified Psychosis and a strong suspicion for an underlying Schizophrenia spectrum disorder. On further assessment as an outpatient, his symptoms were found to be consistent with beliefs and culturally sanctioned practices within his Pentecostal religious community. This poster will present his formal evaluation and work up in the Psychiatric Transition Program at Naval Medical Center San Diego, the Department of Defense's only first episode psychosis program, and discuss his final assessment, disposition, and prognosis. A detailed social history, collateral, psychological formulation,

and thorough medical exam remain invaluable aspects of the work up for First Episode Psychosis especially in the evaluation of diagnostically complex cases and culturally diverse populations.

No. 209

Culturally Diverse Populations and Cultural Concepts of Distress

Poster Presenter: Roopma Wadhwa, M.D., M.H.A.
Co-Authors: Vikas Gupta, M.D., M.P.H., Marsal Sanches, M.D., Ph.D., Rajesh R. Tampi, M.D., M.S.

SUMMARY:

Background: Between 2014 and 2060, the U.S. population is projected to increase from 319 million to 417 million. By 2044, more than half of all Americans are projected to belong to a minority group (any group other than non-Hispanic White alone); and by 2060, nearly one in five of the nation's total population is projected to be foreign born. These data and projections from the US Government census highlight that patient demographics in US are changing and psychiatrists need to be prepared to understand and be able to competently work with culturally diverse patient populations. Methods: We will highlight the DSM-5 glossary of cultural concepts of distress including Ataque de nervios, dhat syndrome, Khyal cap, Kufungisisa, Maladi moun, Nervios, Shenjing shuairuo and susto and aim to promote development of competence in understand and applying that to clinical practice. Conclusion: Cultural competence is important to reduce health disparities and important to promote equity in healthcare. Due to increasing population of racially and ethnically diverse background, cultural competence can enhance the quality of care delivered. Disparities in mental illness burden, care, access, utilization, diagnosis and treatment affect the quality of care. Developing essential attitudes of cultural competence and duly inculcating cultural formulation into patient presentations is the goal for competent psychiatric care. Cultural concepts of distress are ways in which distress is expressed that involves shared ways of talking about social and personal problems. DSM-5 glossary identifies nine examples of cultural concepts of distress which do not necessarily fit or meet criteria for conventional diagnoses. Psychiatrists should be aware of cultural concepts of distress to avoid misdiagnosis, to enhance therapeutic rapport and to improve diagnostic accuracy.

No. 210

Improving Quality of Care and Well-Being of Chinese-Speaking Patients in Acute Inpatient Psychiatric Settings

Poster Presenter: Tianxu Xia, M.B.
Co-Authors: Sanya Virani, M.D., M.P.H., Navjot Kaur Brainch, M.B.B.S., Herbert Mutasiigwa, Deval Deepak Zaveri, M.D.

SUMMARY:

Background: In keeping with the evolving notion of patient-centric care, emphasis has been placed on the cultural appropriateness of management techniques in Psychiatry. Inaccurate historical stereotypes and a lack of understanding of ethno-pharmacology, cultural backgrounds, beliefs and practices are the pitfalls of traditional mental health care, particularly with respect to Asian populations. Chinese patients, the largest subset of this group, tend to have severe psychopathologies and frequently require prolonged inpatient care. A dearth in the number and availability of bilingual and culturally competent providers and insufficient ancillary logistic services limit their access to equitable mental health care even in the most controlled clinical environments. We aim to identify difficulties experienced by providers in managing and delivering optimal mental health services to only Chinese-speaking (CS) inpatients. Methods: Phase 1 of the study entailed an 11-item web-based survey administered over 6 weeks to multidisciplinary health professionals (attending and resident psychiatrists, registered nurses, mental health workers, activity therapists, and social workers) in the department of Psychiatry at a 70-bed academic and teaching community mental health center in Brooklyn. Results: Fifty-two completed responses were received. The majority of respondents were female (62%), between 20-39 years of age (52%), had an average of 0-5 years of experience (52%) and worked 30 or more hours per week (80%). More than half the respondents agreed that there are obvious disparities in management of CS versus non-CS patients. As many as 67% also anticipated difficulties in managing the former which prevented

them from taking on their care. Eliciting accurate histories from patients and obtaining reliable collateral information from family and outpatient providers were identified as the key causes of this disparity by an overwhelming majority. Less than a quarter stated they were certain to utilize interpreter services if and when approached by CS patients on the Unit. The remainder recognized the lack of immediate availability of in-person interpreter and tediousness in the use of language lines as critical obstacles. Discussion: The study refuted our hypothesis that variations in psychopathology primarily caused differences in management across ethnic groups. In fact it revealed certain modifiable factors like the limited availability of interpreters and culturally appropriate services, in addition to stigma as the greatest challenges. Further work will address how to remediate these concerns, provide resources to ameliorate current issues, and implement targeted interventions designed in light of these results to improve overall well-being of this challenging and complex patient subset.

No. 211
"My Mom Wants Me Discharged!"
Poster Presenter: Boris Lee, M.D.

SUMMARY:
Background: Culture is characterized by the values, orientations, knowledge, and practices that individuals derive from membership in diverse social groups. When it comes to patients of Asian descent, cultural factors present many barriers to psychiatric intervention. Though Asian Americans are a heterogeneous group, cultural barriers result in a disparity in mental health care utilization, as only 8.6% of Asian Americans seek mental health care in contrast to 17.9% of the general population (Abe-Kim, 2007). This case describes a 13 year old first-generation Chinese American male after attempting suicide via overdose and the role of culture in impeding psychiatric care. Case Description: 13 year old first-generation Chinese American male with no medical or psychiatric history was admitted to inpatient psychiatry after attempting to overdose on a bottle of ibuprofen in an attempt to commit suicide. The patient lives at home with his single mother, attends 8th grade, has grades in the A to B range, has a group of friends, and excels at school athletics program. He reports a history of depressed mood which began when he met his father in China 3 years ago. He suspects that his father has another family and does not care about him even after meeting in person. Patient's birthday had just recently passed and the father did not wish him a happy birthday, which was one of the main precipitating factors for his suicide attempt. After admission, patient's mother was contacted to discuss care and treatment options. His mother was insistent that no medication intervention be started. She came to visit her son the day after admission and signed him out against medical advice. She cited upcoming Chinese New Year as the reason for her to bring her son home so that they can celebrate without this looming over the family. Patient was subsequently discharged against medical advice. Discussion: The unique aspect of this case is that the patient's mother has traditional Chinese cultural values that she views as more important than the modern day concept of mental health despite the willingness of the patient to receive treatment. It is likely that the stigma of mental illness was heightened during a time of cultural celebration in Chinese New Year. In many Asian cultures, "mental illness reflects poorly on one's family lineage and can influence others' beliefs about how suitable someone is for marriage if he or she comes from a family with a history of mental illness. Thus, either consciously or unconsciously, Asians are thought to deny the experience and expression of emotions (Office of the Surgeon General, 2001)." As such, clinicians should be aware of key cultural considerations that influence mental health in Asian Americans (Kramer, 2002). With understanding, cultural barriers in Asian Americans can be addressed in a more sensitive and effective manner with regards to psychiatric care.

No. 212
My Mom Wants Me Discharged
Poster Presenter: Boris Lee, M.D.

SUMMARY:
Background: Case Description: 13 year old Chinese American male with no medical or psychiatric history was admitted to inpatient psychiatry after attempting to overdose on a bottle of ibuprofen in

an attempt to commit suicide. The patient lives at home with his single mother, attends 8th grade, has grades in the A to B range, has a group of good friends, and excels at school athletics program. He reports a history of depression when he met his father about 3 years ago. He suspects that his father has another family after meeting and staying with him at a hotel in China for the first time. Since then he has had sparing contact with him. Patient's birthday just recently passed and the father did not wish him a happy birthday, which was one of the main precipitating factors for his suicide attempt. After admission, patient's mother was contacted to discuss care and treatment options. His mother was insistent that no medication intervention be started. She came the next day to visit her son and signed him out against medical advice. She cited upcoming Chinese New Year as the reason for her to bring her son home so that they can celebrate without this looming over the family. Patient was subsequently discharged against medical advice. Discussion: Relevance: In the last census, 5.6% of the U.S. population or 17.3 million people are of Asian descent. The population of people of Asian descent increased 46% from 2000 to 2010, which is more than any other race group. With this level of population growth, clinicians are more likely to encounter patients of Asian descent and would benefit from aware of cultural considerations in treating this population.

No. 213

Assessing Depression Severity With Self-Rated Versus Rater-Administered Instruments in Patients With Epilepsy: A Systematic Review

Poster Presenter: Erin Campbell Fulchiero, M.D.
Co-Authors: Christine Marie Collins, M.D., Shirin Jamal-Omidi, Martha Sajatovic, M.D.

SUMMARY:

Background: Nearly 25% of patients with epilepsy have comorbid depressive disorders with variable degrees of severity impacting function and quality of life. In order to monitor and treat depressive symptoms appropriately, physicians utilize "gold standard" rater-administered depression severity instruments, as well as self-rated depression screening tools. However, patient-rated measures tend to be less cumbersome for patients and have a lower resource burden in contrast to trained rater-administered measures. Objective: This systematic review sought to assess the extant literature comparing the relative utility of patient-rated versus expert-rated measures in categorizing depression severity over time, particularly where treatment is indicated and administered. Methods: A literature search was conducted using PubMed, ScienceDirect, and OVID databases for English-language studies conducted between July 2007 and July 2017 that utilized self-rated and expert-rated scales of depression severity to evaluate patients with epilepsy. Search terms included "depression", "depressive disorder", "epilepsy", "rating scale", and "questionnaire". Results: A total of 5,669 records were identified and 257 found to meet inclusion criteria according to three separate reviewers. Of these, 70 articles were deemed eligible for full-text review. Overall, 9 total studies were identified, which used both self- and rater-administered scales to assess depression severity in patients with epilepsy. One study was a randomized controlled trial, two studies were cohort studies, one study was a case-control, and five studies were cross-sectional in design. Self-rater scales included the Patient Health Questionnaire (n=1), the Hospital Anxiety and Depression Scale (n=1), the Neurological Disorders Depression Inventory for Epilepsy (n=1), Zung Self-Rating Depression Scale (n=1) and the Beck Depression Inventory (n=5). The Montgomery-Asberg Depression Rating Scale (MADRS) and the Hamilton Depression Rating Scale (HDRS or HAM-D) were administered in 4 and 6 of 9 studies, respectively. All scales were able to identify clinical depression in study samples with positive correlations at standard cut-offs. Among those reported, correlation coefficients were between 0.78 and 0.80. However, data making direct comparisons between rater- and user-administered measurements of depression severity were variable across studies. Additionally, study populations were relatively small and heterogeneous. Conclusions: Self-rated instruments of depression severity are efficient tools for identifying depression in patients with epilepsy. However, further studies comparing these validated self-rated depression assessment tools to gold-standard user-administered scales are needed for the longitudinal assessment of depression severity in people with epilepsy

No. 214

Psychiatric Inpatients With Comorbid Stimulant Use Disorders: Impact on Impulsivity and Clinical Outcome

Poster Presenter: Dean Joseph Atkinson, M.D.
Co-Authors: Shweta Kapoor, Gregory Larimer, M.D., Crispa Josephine Aeschbach Jachmann, M.D., Melissa K. Allen, D.O., Teresa Pigott

SUMMARY:

BACKGROUND: Substance use disorders are often comorbid with mood and psychotic disorders, and lifetime rates of substance use are higher for psychiatric patients than the general population. Comorbid stimulant use disorders (cocaine, meth/amphetamine) are particularly prevalent in psychiatric inpatients, but there is limited data concerning their impact on subsequent hospital course. Previous studies have linked mood, psychotic, and/or substance use disorders with elevated levels of impulsivity, but few studies have examined this construct in psychiatric inpatients with comorbid stimulant use. METHODS: 366 adult patients with a primary diagnosis of depressive disorder, bipolar related disorder, schizophrenia spectrum disorder, or substance-related disorder were admitted to a psychiatric hospital in Houston between 1/2013 and 7/2014. On admission, they completed the Barratt Impulsiveness Scale (BIS-11), a common self-report measure to assess impulsivity. Substance use was also evaluated by an independent interviewer using the National Institute on Drug Abuse (NIDA) Quick Screen (assessment of alcohol, tobacco, prescription drug, and illicit drug use); patients with positive screens were evaluated with the NIDA Modified ASSIST v2.0 (substance abuse in the past 3 mo. in 10 categories) and categorized based on the results. Urine Drug Screen (UDS) results (n=333) were also obtained. NIDA risk scores were divided into 2 groups (low vs. moderate/high risk). Patients with UDS positive for cocaine were assigned to Group 1 (COC); those positive for amphetamine were assigned to Group 2 (AMP), and patients with negative UDS results and low NIDA risk scores were assigned to Group 3 (CONTROL). The length of hospital stay (LOS) was used to measure clinical outcome. A one-way ANOVA was used to examine group differences in LOS and BIS-11 scores. RESULTS: Of 366 patients, 54.9% were males with mean age of 35.2 years. On the NIDA Modified ASSIST, 19.9% of inpatients were positive for cocaine and 8.7% for meth/amphetamine. On the UDS, 10.5% were positive for cocaine and 6.3% for amphetamine. The ANOVA revealed a significant difference in LOS [$F(3,329) = 59.8$, $p = 0.016$] with AMP group having the shortest LOS (mean+SD, 6.2+2.9 days), followed by the COC group (6.3+3.2 days), and finally the CONTROL group (8.2+3.2 days). No significant differences were seen in total BIS scores or NIDA risk scores. CONCLUSION: Roughly 25% of psychiatric inpatients in the current study admitted to stimulant use in the past 3 months; 15% were UDS-positive. Those with comorbid stimulant disorders had a shorter LOS compared to those with negative UDS and low NIDA risk scores, suggesting that exacerbation of their mood and/or psychotic symptoms may reflect more of a “state” than “trait” condition. These results highlight the importance of investigating stimulant use disorders in psychiatric inpatients in order to reduce acute exacerbations and subsequent need for inpatient treatment.

No. 215

Improving Mental Health Care Outcomes Through Empathy Training: The Role of Virtual Patients

Poster Presenter: Michelle Trieu
Co-Authors: Shivashankar Halan, Benjamin Lok, Adriana E. Foster, M.D.

SUMMARY:

Background A cornerstone of healthcare is the physician’s ability to create rapport with their patients. Empathy is the ability to relate to others’ experiences even without having gone through it themselves. Medical professionals use empathy to foster greater interpersonal communication, increase awareness of a patient’s condition, and improve patient outcomes. Patients presenting with mental health concerns often disclose emotions which can elicit strong behavioral responses on clinicians’ part. Such responses can affect empathetic communication and affect the therapeutic alliance with the patient. As the neurobiology of empathy is increasingly being understood, so are modalities to provide empathy training. We offer an overview of methods used to teach empathy and describe the results of research

exploring the role of virtual patient (VP) training to promote empathetic communication. Methods Studies were held at two institutions between 2012-2017 exploring the role of training with VP technology to address aspects of clinician-patient communication including history taking, suicide risk assessment and empathy. We created Virtual People Factory, a web application that utilizes a crowd-sourcing approach to develop VP experiences. Content experts from various medical specialties created VP scenarios covering various medical and allied health sciences domains. Results Medical students who interacted with bipolar VPs were more likely to assess 4/5 suicide risk areas and 11/14 bipolar symptoms, compared to students who completed a video module. Groups that received immediate feedback on their empathy and groups that viewed a video of a patient's backstory were more likely to offer empathic statements ($p<0.0001$), appear warm and caring ($p=0.015$), and form greater rapport with standardized patients ($p=0.004$) than those who received neither. Of those groups, the ones who received immediate empathy feedback (2.91 ± 0.16) ranked higher on an expert-rated six-point empathy scale than the backstory (2.20 ± 0.22) and control group (2.27 ± 0.21). If speech pathology students were able to create and interact with their own VPs that matched their own race, they were more empathetic towards race-concordant VPs than towards those of different races. Discussion These findings suggest empathy is a learned skill that can be enhanced using VPs when embedded in curricula, particularly in mental health courses. While empathy in healthcare encounters can decrease symptoms and improve patient well-being, studies of empathy training techniques still need to demonstrate improved patient outcomes beyond immediate patient satisfaction. We plan to explore whether empathy training can lead to increased treatment adherence, satisfaction, and patient well-being.

No. 216

"THINK DELIRIUM": A Multidisciplinary Assessment, Intervention, and Educational Program

Poster Presenter: Milankumar Nathani, M.D.

SUMMARY:

Delirium is an acute change in cognition and a disturbance of consciousness due to various etiological factors such as medical illnesses, substance intoxication or withdrawals, medications, etc. Delirium affects 10 to 30 percent of hospitalized patients with medical illness and is more prevalent in Intensive Care Unit (ICU), post-acute care units and nursing home settings. Delirium is associated with higher morbidity, extended hospital stays, and mortality and a major percentage of patients with delirium go undiagnosed. In an effort to target this epidemic, a Veterans Integrated Service Network (VISN) funded multidisciplinary delirium team project was implemented at North Florida South Georgia VA medical center. The goal of this project is early identification, assessment, collaborative management of delirium patients and safe transition of the patient back into their home and community. The project consists of clinical components, education component and research component. Clinical support is provided by the delirium consult team which includes geriatric medicine physicians, geriatric psychiatrists, nurse practitioner, and pharmacists. The delirium screening tool is embedded in the nursing admission note and shift assessment and when positive, a consult is generated. This helps provide consultations to older patients allowing early treatments, avoid or decrease common complications that arise with delirium and decrease inappropriate medication use in elderly. The education section includes access to the virtual dementia simulation experience, skills fair and other presentations related to delirium. The research component includes collection of data and outcome measures. There are more than 700 consults completed and outcomes such as length of hospital stay, readmission rate, mortality were measured and it showed positive trends. Additional data noted are demographics, date of admission to consult, date of consult to discharge, and disposition location.

No. 217

Predictors of Psychiatric Readmission Among Patients With Schizophrenia or a Mood Disorder at an Academic Safety-Net Hospital

Poster Presenter: Olivia Ann Moffitt, M.D.
Co-Author: Jane Hamilton

SUMMARY:

Background: Health care payers, policy makers, and

providers have identified 30-day readmissions after psychiatric hospitalization as an indicator of the quality of inpatient care and the coordination of community based mental health care after discharge. The creation of the Hospital Readmissions Reduction Program, which requires the Centers for Medicare & Medicaid Services to reduce Medicare payments to acute care hospitals with excessive readmission rates, has dramatically altered health care reimbursement. As a result, there is a growing interest in defining predictors of readmission following psychiatric hospitalization. Here, we examine predictors of psychiatric readmission among 5,657 patients diagnosed with schizophrenia or a mood disorder who were consecutively admitted to our psychiatric hospital from January 1, 2010 to December 31, 2013. Methods: Using Andersen's Behavioral Model of Health Service Use for guidance, our goal was to examine the relationship between predisposing (age, sex, race/ethnicity), enabling (system or structural factors including prior utilization) and need (clinical) factors and the likelihood of 30-day psychiatric readmission. We conducted multivariate logistic regression analysis using block-wise entry of variables to examine significant predictors. Results: Among predisposing factors, younger patients had an increased likelihood of readmitting within 30 days of discharge (adjusted odds ratio [aOR]: 0.146, 95% confidence intervals [CI]: 0.067-0.317, $p < 0.001$). Among enabling factors, having 3 or more psychiatric hospitalizations (aOR: 5.505, 95% CI: 4.392-6.899, $p < 0.001$), being uninsured (aOR: 2.210, 95% CI: 1.570-3.111, $p < 0.001$), and being admitted involuntarily (aOR: 1.981, 95% CI: 1.529-2.568, $p < 0.001$) strongly predicted 30-day readmission. Homelessness was only marginally significantly associated with readmission within 30 days (aOR: 1.402, 95% CI: 0.994-1.979, $p = 0.054$). Among need factors, patients who scored higher for guilt feelings (aOR: 0.851, 95% CI: 0.746-0.971, $p = 0.016$), suspiciousness (aOR: 0.836, 95% CI: 0.704-0.993, $p = 0.041$), or mannerisms and posturing (aOR: 0.892, 95% CI: 0.826-0.964, $p = 0.004$) on the Brief Psychiatric Rating Scale (BPRS) or tested positive for cannabis use (aOR: 0.683, 95% CI: 0.520 – 0.897, $p = 0.006$) had a decreased likelihood of readmitting within 30 days. Conclusion: Our study found enabling factors, including having 3 or more psychiatric hospitalizations, being uninsured and involuntary admission status, to be the strongest predictors of readmission within 30 days of discharge. Surprisingly psychiatric symptoms as measured by the BPRS were not significantly associated with an increased risk of 30-day readmission. Several need factors, including guilt feelings, suspiciousness, and mannerisms and posturing, as assessed by the BPRS, as well as cannabis use, were associated with a significantly lower risk of 30-day readmission.

No. 218

Does 30-Day Readmission Have Relevance in Psychiatric Patient Population?

Poster Presenter: Pankaj Manocha, M.D.
Co-Authors: Muhammad Zeshan, M.D., Jayanta Chowdhury, M.D., Maliha Mahmood Desmukh, M.D., Sigella Vargas, M.D., Darmant Bhullar, M.D., Zaki Ahmad, M.D., Amina Hanif, M.D., Raminder Pal Singh Cheema, M.D., Wen Gu, Katya Frischer, M.D.

SUMMARY:

Background: Hospital readmission with in thirty day time period has been a major issue in the United States and as per data from Center for Medicare & Medicaid Services, the cost of readmission is estimated to be 26$ billion annually. There is an enormous push to reduce these readmissions and in New York. Delivery System Reform Incentive Payment Program (DSRIP) has been established to restructure the health care delivery system with the primary goal of reducing readmissions by 25% over 5 years with the budget of up to $6.42 billion dollars. DSRIP uses LACE score (Length of stay, Acuity of admission, Co-morbidities & Emergency Department visits in the previous six months) as an assessment tool for determining the high-risk patients for emergent hospitalizations in medicine, but this score has limited validity to psychiatric patients. Relatively new tools developed for psychiatric hospitalization, READMIT score incorporates a weighed scale based on the following factors: repeat admissions, emergent admissions (i.e. harm to self/others), diagnosis (psychosis, bipolar and or personality disorder), unplanned Discharge, medical co-morbidity, prior service use intensity, and time in hospital. In an attempt to provide better outcomes for our patient population BLHC has developed a

scale that attempts to incorporate factors specific to its own patient populations. This scale was based on risk factors identified after literature review and coined it the ZAC score. Methods: We scored the available tools LACE and READMIT for 170 patients, who were admitted to our inpatient units, to assess the accuracy of both measures in predicting psychiatric inpatient readmission within 30 days. The sample consisted of consecutively admitted patients to our inpatient psychiatric units at Bronx Lebanon hospital. Results: Our patients were primarily males (58%), more often African Americans (55%) and Hispanic (39%), and had a diagnosis of psychotic disorder (62%). Independent t-tests and receiver operating characteristics (ROC) analyses were used to compare LACE, READMIT and ZAC score in their ability to differentiate patients who were readmitted in a psychiatric facility within 30 days of discharge. Time to readmission analysis will be conducted using Kaplan Myers curves. Conclusion: To date, there is no validated tool, used to predict readmissions in the psychiatric patient population. We question the validity and usefulness of predicting 30-day readmissions. We plan to present the results of time to readmission analysis to better understand if 30-day hospitalization holds relevance in psychiatric patient population.

No. 219

Effect of Cardio-Metabolic Monitoring on Hba1c Levels in Patients on Antipsychotics in an Outpatient Clinic

Poster Presenter: Pankaj Manocha, M.D.
Co-Authors: Frozan Walyzada, M.D., Raminder Pal Singh Cheema, M.D., Ashaki Martin, M.D., Monika Gashi, M.D., Charles Rodolphe Odom, M.D., Sasidhar Gunturu, M.D., Wen Gu, Ketki Sharadkumar Shah, M.D., Panagiota Korenis, M.D.

SUMMARY:

Background: Patients with serious and persistent mental illness (SPMI) have frequent comorbid coronary artery disease (CAD), diabetes mellitus (DM), and other cardiometabolic risk factors. Mortality due to DM in patients with SPMI is twice as common when compared to general population. Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) schizophrenia trial estimated 43 percent prevalence (54% in Females; 36% in Males) of metabolic syndrome in patients with schizophrenia at baseline, and patients left untreated for cardiometabolic risk factors had high percentage including for DM (30.2%), Hypertension (HTN) (62.4%) and Dyslipidemia (88.0%). This necessitates pressing need of cardiometabolic risk monitoring in patients on antipsychotic treatment. **Methods:** This study was designed as a quality improvement project to understand if the APA guidelines for cardiometabolic monitoring were followed at our outpatient clinic. During phase one, retrospective chart of 1055 patients were reviewed during the one-year study period (2014) at psychiatry outpatient clinic of Bronx Lebanon Hospital Center to establish baseline performance. phase 2 involved interventions, including provider education on cardiovascular monitoring guidelines and improvement in the electronic medical record such as alerting provider if the monitoring wasn't being done along with the development of cardiometabolic screening order set. phase 3 involved retrospective chart reviews of these patients for the calendar year 2017 to see whether performance has improved as a result of the interventions. **Results:** Baseline data of 1055 reviewed charts showed that 55% of our patients were on antipsychotics. Our patients had a high prevalence of hypertension (39%), obesity (35%), smoking (34%), diabetes mellitus (25%), hyperlipidemia (25%). Our baseline data showed that cardio metabolic monitoring was below par with following monitoring results: fasting glucose monitored (52%), HbA1c (24%), LDL (37%), Cholesterol (38%) and BMI (67%). Out of 1055 patient reviewed, 242 patients (24%) had their Hba1c monitored with a mean of 6.69mmol/mol during the calendar year 2014. In phase 3, out of 3026 patient reviewed, 359 patients (12%) had their Hba1c monitored in the first quarter of 2017 with a mean of 6.29mmol/mol. Independent sample t-test showed that this difference did not reach statistical significance (p=0.4) but paired t-test showed the difference is significant (p=0.03). Final phase 3 results will be collected at the end of the calendar year 2017 to see the effect of our intervention on cardio metabolic monitoring. **Conclusion:** The baseline data showed that the cardio metabolic monitoring was under performed in patients on antipsychotics. The post intervention data shows

that in the first quarter of 2017, mean values of HbA1c monitored in patients had lower HbA1c values than their counterparts from the first phase (2014) though the difference was not statistically significant. The final results will be collected at the end of 2017.

No. 220

Risk Factors for 12-Month Readmission at an Academic Acute Inpatient Psychiatric Unit

Poster Presenter: Patrick Buckley
Co-Authors: Joshua Ryan Smith, M.D., Sama Mir, Nassima Ait-Daoud, M.D., Mudhasir Bashir, M.B.B.S.

SUMMARY:
INTRODUCTION Readmission rates are a valid indicator for the quality of inpatient psychiatric care.[1] Although risk factors for psychiatric readmission have been studied previously, the evidence is inconsistent and contradictory. Readmission risk factors likely vary across institutions due to varying patient populations, inpatient treatments, and post-discharge factors such as access to community mental health services. This variability suggests that psychiatric readmissions may be best studied on the level of individual inpatient units. The purpose of this study is to identify risk factors for 12-month readmission to the University of Virginia's acute inpatient psychiatric unit. Identifying potentially-modifiable risk factors for readmission can assist with improving patient clinical stability and transition to outpatient treatment. METHODS This study was a retrospective chart review of all patients admitted to UVA's adult acute psychiatric unit in 2013. Candidate risk factors for readmission including demographic information, socioeconomic data, and psychiatric diagnoses were abstracted from each patient's discharge summary. Readmission to UVA's inpatient psychiatric unit within 12-months of the index admission was also determined for each patient. A multiple logistic regression model was used to examine the associations between candidate risk factors and the primary outcome of 12-month readmission. RESULTS 850 patients were included in this study. 22% of patients were readmitted within 12 months and 3% of patients had multiple readmissions within that time period. On multiple logistic regression, a diagnosis of a thought disorder (i.e. schizophrenia, schizoaffective disorder, psychosis NOS), anxiety disorder, or substance-induced mood disorder was associated with a significantly-increased risk of readmission. An active romantic relationship was the only significant protective factor against readmission. DISCUSSION This study examined risk factors for 12-month readmission to UVA's inpatient psychiatry unit. Significant risk factors for readmission included a diagnosis of a thought disorder, anxiety disorder, or substance-induced mood disorder. Romantic relationship was found to be a protective factor, consistent with other studies showing that social support significantly reduces readmission risk. One limitation is that this study only considered admissions to UVA and did not capture admissions to other hospitals. Overall, our model had modest explanatory power and may be improved by considering other potential risk factors such as discharge destination, continuity of outpatient care, and history of prior admissions.

No. 221

A Retrospective Analysis of Treatment Over Objection

Poster Presenter: Raymond St. Marie, M.D.
Co-Authors: Sevie Kandefer, Yogesh D. Bakhai, M.D.

SUMMARY:
Background: In psychiatric inpatient facilities, it is a common occurrence for patients to object receiving appropriate medical treatment. Often times, hospital providers will detect that a patient who is persistently refusing medical treatment lacks capacity to do so and will subsequently, as it is the patient's right, initiate a rights-driven approach to pursue involuntary treatment. There is lack of current information about the intermediate and long-term incidence, patterns, and outcomes associated with treatment over objection (TOO) in an inpatient psychiatric setting. Our study aims to investigate the patterns and outcomes associated with TOO at Erie County Medical Center (ECMC). Method: Data was obtained from a retrospective chart review using the electronic medical record system at ECMC. The subjects consisted of all the patients above the age of 18 who were hospitalized at ECMC between the 2015-2016 calendar year who refused psychiatric treatment and who a court ordered TOO was sought (n=153). Data collected on

these individuals were divided into three categories: demographic variables (age, race, gender), clinical variables (diagnosis, length of stay, TOO filing outcomes), and discharge variables (1 month and 1 year rates of readmission). ECMC comprehensive patient data was obtained through the ECMC IT department. Results: This analysis yielded descriptive statistics that demonstrate previously unidentified comparisons between all ECMC psychiatric hospitalized patients and those who had TOO filed: Age distribution appears to be similar in the ECMC group and TOO group. Average length of stay in TOO patients is 31 +/- 19 days compared to ECMC patients which is 12 +/- 16 days. There is higher percentage of both 1 month and 1 year readmission rates in the TOO group. There is a greater percentage of Psychotic disorders seen in TOO patients (77.8%) compared to ECMC patients (38.3%). There is a greater percentage of depressive disorders seen in ECMC patients (22.1%) compared to TOO patients (5.2%). Percentages of Bipolar disorder in both groups are similar (TOO 16.3%, ECMC 14.8%). The demographics of the TOO patients more closely mimic the demographics seen in the city of Buffalo rather than the demographics of Erie County. Of those who went to court (n=83), TOO was granted in 79 of the cases demonstrating a 95.18% success rate of TOO being granted. 44% of patients for whom TOO was filed agreed to taking medication prior to the court hearing. Conclusion: There are differences in length of stay, Number of 1 month and 1 year readmissions, and diagnoses when comparing TOO patients to all ECMC psychiatric patients, however future studies should utilize statistical comparisons in order to identify true statistical significance. There is a 95% success rate of TOO being granted if the patient does not accept medications prior to court. These results offer an updated description of TOO in an acute inpatient psychiatric setting.

No. 222
WITHDRAWN

No. 223
Influence of White Matter Hyperintensities, Lacunar Infarction, and Cerebral Microbleeds on Cognitive Function and Quality of Life in CADASIL Patients

Poster Presenter: Sooyoun Lim, M.D.

SUMMARY:
Background: CADASIL is the acronym for Cerebral Autosomal Dominant Arteriopathy with Subcortical infarcts and Leukoencephalophathy. CADASIL is an inherited small-artery disease caused by mutations of the NOTCH 3 gene on chromosome 19. The main MRI findings of CADASIL are white matter hyperintensities (WMHs), lacunar infarction, cerebral microbleeds (CMB). The purpose of this study is to investigate the effects of three major neuroimaging markers of CADASIL on cognition and quality of life (QoL). Method: CADASIL patients completed the comprehensive clinical evaluation including 3 T MRI and genotyping of NOTCH3. A face-to-face standardized diagnostic interview, physical and neurological examinations were administered to each subject by two neuropsychiatrists. Neurocognitive function was evaluated using CERAD-K neuropsychological assessment battery and quality of life were measured using the Short Form 36 Health Survey Questionnaire (SF-36). It consisted of 36 items covering eight domains: physical functioning (PF), role limitations caused by physical health problems (RP), bodily pain (BP), perception of general health (GH), vitality (VT), social functioning (SF), role limitations due to emotional health problems (RE), and mental health (MH). The eight domains may be further groups into two summary measures of the physical component score (PCS) and the mental component score (MCS). Results: 84 CADASIL patients, aged 34 to 86 years, participated in this study WMH volume had a negative impact on various neurocognitive tests ($p<0.05$, t-test) except constructional praxis. The number of lacunar infarctions was associated with poor performance of MMSE-KC ($p<0.05$, t-test), and the number of CMBs did not influence any scores of neurocognitive tests. In measuring quality of life, WMH volume was associated with PF, RP, RE VT, MH, PCS, and MCS. The number of lacunar infarction was only related to poor PF ($p<0.05$, t-test). The number of CMB was associated with the lower scores of quality of life, especially in GH, VT, MH, and PCS. WMH volume (odds ratio [OR]: 1.03, 95% confidence interval [CI]: 1.007-1.060) in patients with CADASIL was associated with dementia, indicating that for every 1ml of WMH volume, the risk of depressive disorder

increased by 3%. Conclusion: WMH volume, lacunar infarction, and cerebral microbleeds have different effects on cognitive function and quality of life in CADASIL patients. WMH volume has the most significant effect on both cognitive function and quality of life. The number of CMB has not any effects on cognitive function but is related to poor quality of life.

No. 224

The Effectiveness of a Class-Based School Violence Prevention Program for Elementary School Children

Poster Presenter: Sooyoun Lim, M.D.

SUMMARY:

Objectives: This study was conducted to investigate the effectiveness of a class-based school violence prevention program for elementary school student. Methods: The study subjects were 57 elementary school fifth graders. 29 students were assigned to 8 sessions of school violence prevention program offered for 4 weeks, and 28 students have been assigned to a control group of same period. We assessed participants at baseline and post-intervention, through their self-report questionnaires such as Child Depression Inventory(CDI), Strengths and Difficulties Questionnaire(SDQ) and school violence experience, awareness about school violence, and coping ability to school violence. We compared the scores between baseline and post-intervention result in each group and compared post-test scores between intervention group and control group. We also compared the baseline and post-interventions according to gender and examined the difference in the program according to gender. Results: At the post-intervention, there was significant difference CDI scale (13.62 vs 9.03, p-value 0.00) and the questionnaire evaluation of the ability to cope with school violence (51.14 vs 57.32) between baseline and post-intervention in intervention group. Comparing the intervention group and the control group, the post-intervention CDI score and the change in perception of school violence showed significant improvement in the intervention group compared to the control group. When comparing the pre- and post-evaluation of the intervention group according to gender, male group ($p < .05$) and female group ($p < .01$) was dropped in the CDI scale scores significantly compared to the pre- and post-assessment evaluation. Also, in the female students, the ability to cope with school violence increased significantly (49.46 vs 57.23) in the preliminary evaluation ($p < .01$), but there was no significant difference in male students. In the comparison between intervention and control groups according to gender, there was a significant improvement in the perception of school violence in male students ($p < .01$), and in female students, significant difference in CDI scores ($p < .01$) respectively. Conclusions: In an effort to prevent school violence in advance, the school violence prevention program significantly reduced depression scores compared to pre-intervention and improved ability to cope with school violence. In addition, the depression scores and the perception of school violence were improved in the intervention group compared to the control group. In the male students, the perception of school violence was significantly changed, and in the female students, the depression was decreased. These findings have important implications to develop effective violence prevention programs.

Monday, May 07, 2018

Poster Session 5

No. 1

Back to the Future: Symptoms That Could Have Changed Everything

Poster Presenter: Francisco Javier Pino Calderon
Co-Authors: Jose Miguel Zoido Ramos, Antonio Leal, Beatriz Martín, Javier Busto, Jose Ramon Gutierrez Casares

SUMMARY:

BACKGROUND: We know that the presence of ADHD symptoms is frequent in people who have SUD1, being known that treating these symptoms adequately in childhood decreases the risk of presenting problems of addiction in adulthood. The Wender Utah Rating Scale2 helps retrospectively to determine if an adult could have presented symptoms for ADHD in childhood/adolescence. On the other hand, recently, Borsboom et al has enacted its “Network Theory of Mental Disorders” 3 in which disorders emerge from the symptoms interactions that reinforce each other, rather than

arising from a common underlying factor. In this framework it is possible to determine which symptoms are more relevant in the symptomatic network structure. OBJECTIVE: Determine through WURS25 what symptoms could be nuclear in childhood in a sample of addicted adult patients with symptomatic contamination by ADHD4, performing an assessment through Network Analysis. METHODS: We started from a sample of 148 patients (Average Age = 37.23 years, 87.83% Men) with addiction to different types of substances (Alcohol [n = 65], Cocaine [n = 12], Cannabis [n = 49], Opiates [n = 22]) in which we found a high presence of symptomatic contamination by ADHD (Mean ADHD-RS = 22.30) and assess by WURS25 through network analysis, which of the symptoms were more relevant. According to the indications of Networks Psychometrics5 we estimate the structure of the network through a Gaussian graphical model (Graphical Lasso Regularization) where the items (WURS25) are represented as nodes, and the connections between them through links. We use RStudio (R version 3.4.1) for estimating and plotting the network (qgraph package), and to perform the centrality analysis. RESULTS: In Fig.1 we can observe the network structure where the nodes are located following the Fruchterman-Reingold algorithm (more important the more central), being the association (positive in blue, negative in red) between them stronger the thicker and more intense the color of the link.

No. 2

The Role of Personality Disorders in Addiction to Tobacco During Pregnancy

Poster Presenter: Ester di Giacomo
Co-Authors: Fabrizia Colmegna, Francesca Pescatore, Massimo Clerici

SUMMARY:
Background and Aims: Tobacco smoking is a major health concern. Many women smoke during their reproductive years, some of them during their pregnancy, with adverse outcomes for the newborns physical health. Personality disorders are contributors to addiction and we aim at demonstrating their higher contribution in maintaining addiction to tobacco during pregnancy compared to other psychopathology and the need of their detection as a preventive effort. Method: 150 women, consecutively admitted to the Perinatal Psychiatric Outpatient Department from January, 2011 to December, 2016, were tested with the SCID II, CTQ, WHOQOL-BREF, EPDS, BDI and BAI. Tobacco use disorder was attested with the fulfillment of DSM 5 criteria. Results: 46% (n=69) of the sample was affected by at least one personality disorder ("PD+"). "PD+" showed a significant higher rate of pregnant women addicted to tobacco (?2=.040). The average number of cigarettes per day was notably distinct, since Narcissists smokes twice the amount compared to "PD-" and "other PDs", while Borderline has a halfway consumption (7.20±5.54 vs 3.37±4.62 vs 3±3.39 vs 5.50±4.10). ANOVA and POST HOC showed a significance between Narcissists and "other PDs" (p=.035). The number of heavy smokers (? 10 cigarette/day) or of women able to quit due to pregnancy did not differ significantly. Conclusion: Personality disorders demonstrate to be a clear contributor in supporting addiction to tobacco during pregnancy. The inclusion of personality evaluation and management in tobacco dependency treatment programs is strictly encouraged to boost their efficiency and increase tobacco abstinence.

No. 3

New Findings About the Interplay Among Clarithromycin and the Immune and Central Nervous Systems

Poster Presenter: Ester di Giacomo
Co-Authors: Fabrizia Colmegna, Enrico Biagi, Massimo Clerici

SUMMARY:
Some antibiotics are reported to stimulate adverse psychiatric effects with an onset within 7 days of initiation and resolution 24–48 hrs after its interruption. Known as Antibiomania, it often develops in subjects with no personal/family psychiatric history; age and genetic influences have been excluded. Clarithromycin is among those more commonly associated with psychosis; it has an excellent CSF penetration, but no reports of interaction with central neurotransmitters were found so far in the literature. "In July 2015, a 36-year-old woman, affected by Common Variable Immunodeficiency, was admitted to the Emergency Room (ER) due to low level of consciousness. Vital

signs at presentation were normal and there was no evidence of trauma. Results of neurologic, cardiopulmonary and abdominal examinations as well as laboratory data were within normal limits. Drug abuse screening was negative and blood alcohol concentration was zero. A CT scan of the head was normal. Psychiatric examination highlighted decreased consciousness, confusion and opponent behavior. Her psychiatric history documented two previous iatrogenic episodes in 2013 after treatment for eradication of Helicobacter Pilory (Clarithromycin 1 g b.i.d + amoxicillin 2 g b.i.d). She developed mood symptoms at the first episode and psychotic symptoms at the second. The last administration of Clarithromycin (1 gr b.i.d for two days) dated back to a week before admission to the ER. She was administered lorazepam 3 mg i.v. but she needed physical restraint due to physical aggressive behavior. She was given haloperidol 2 mg i.m and admitted to the Inpatients Psychiatric Unit. She quickly recovered to a normal mental examination, Haloperidol 1 mg q.d. was discontinued and she was discharged after 5 days and referred to the Outpatients Psychiatric Department. Her mental health remained free of symptoms in a six-month follow up. This severe non-dose related adverse effect has been reported to AIFA (Italian Drug Administration) through Hospital Pharmacy Department (ADR n.344891)." Discussion: Proofs highlighted here support new evidence on the interaction between Clarithromycin and neurotransmitters. Moreover, those adverse effects significantly show a longitudinal progression that gets worse with each new episode, increasing in seriousness while decreasing the dosage needed to trigger psychiatric symptoms. As a consequence it is undeniable that kind of progression implies a mechanism of "memory", strictly suggesting an immunological response to Clarithromycin. Although evidence about an interaction between antibodies and neurotrasmitters has been documented in animals only, our proofs strictly point to this discovery in human beings too. Albeit Antibiomania seems rare, a precise incidence is still unclear. Implications of the interactions of Clarithromycin with the Immune and Neurological systems could stimulate in-depth research on the pathway and molecular

No. 4

Comparative Analysis of the Subjective Emotional State in a Sample of SUD Patients: A Network Approach

Poster Presenter: Francisco Javier Pino Calderon
Co-Authors: Jose Miguel Zoido Ramos, Sara Marquez Sánchez, Antonio Gil, Lara Suarez Dieguez, Fracisco Barquero Paz, Jose Ramon Gutierrez Casares

SUMMARY:

BACKGROUND: Despite advances in research methods in Neuroscience and the birth of RDoC1 and given that current diagnoses do not always refer to real diseases, a new paradigm in psychiatry is necessary. In this conceptual framework, a new vision of psychopathology appears as a complex system of symptomatic networks, in which the structuring of the different disorders arises from the interaction of mutually reinforcing symptoms2. OBJECTIVE: Our purpose is, through this approach provided by the theory of complex networks, to analyze and to compare the subjective emotional state3 in a sample of 114 patients with SUD by different substances (Cannabis [n = 49] and Alcohol [n = 65]) . METHODS: We assess the emotional state of the sample through 5 different visual-analogical scales [VAS] (transformable in numerical values from 0 to 10): General State [GS], Sadness [B], Anxiety [A], Irritability [I], Suspicion [S]). Following the indications of Networks Psychometrics4, through a Gaussian Graph Model we make an estimation of the respective subnets where the nodes represent the different emotions, and the edges between them (correlations observed), the respective associations. For this, we use the RStudio program (R version 3.4.1) through the qgraph (for estimation and representation) and NetworkComparisonTest (for the comparative analysis) packages. RESULTS: Table 1 shows the total and by group means of the different variables; the comparison of means showed statistically significant differences only for the item "Sadness [B]" (Table 2). In Fig. 1 we can observe the network structure for the VAS in the two groups of SUD. In the Alcohol group, the "Anxiety [A]" would be the most n

No. 5

BDI-1A Network Structure: A Comparison Between

ADHD and No ADHD in an Addicted Patients Sample
Poster Presenter: Francisco Javier Pino Calderon
Co-Authors: Jose Miguel Zoido Ramos, Beatriz Martín, Jose Ramon Gutierrez Casares

SUMMARY:
BACKGROUND: In the literature have been demonstrated the links between SUD, MDD, or ADHD although few studies have contemplated the joint presence of the three, which results in significant implications for clinical-therapeutic assessment1. Recently the network approach to psychopathology2 is shown as a way of conceptualizing mental disorders, proposing that these result from causal interactions between symptoms rather than the manifestations of some underlying common factor, where symptoms are nodes and causal interactions between them are connections. In this approach, comorbidity3 is hypothesized to arise from direct relations between symptoms of multiple disorders. OBJECTIVE: Analyze and compare the BDI-1A network structure of substance-addicted sample, according to the presence of ADHD or not. METHODS: Our sample is composed by 148 patients. We use the BDI-1A and DuPaul ADHD-RS to assess the sample, and divide in two groups (ADHD [n=65] and No ADHD [n=78]). For the BDI-1A network approaching of the two groups we use the indications of Network Psychometrics4 using the Gaussian Graphical Model to estimate a regularized Network (Graphical Lasso Regularization) where variables (BDI-1A items) are entered as nodes, and connections (observed correlations or covariance matrix) between them, are represented by edges. We use in RStudio (with 3.4.1 R version) the bootnet and qgraph packages for estimating and plotting the networks and NetworkComparisonTest package for comparing them. RESULTS: The mean age was 36.59, and the mean score for BDI-1A and ADHD-RS were 16.53 and 22.45. 11.49% have a severe depression, 31.76% moderate, and 27.03% mild. A 45.27% had a ADHD. Both conditions were in a 36.48%. The network structure of both groups is represented in Fig1, darkblue edges represent positive connections and red, negative, the thicker and edge, the stronger the connection, being central nodes more important than the peripheral ones. The centrality measures are in Fig2. The most important and influential nodes in ADHD group was 9, 12 and 15, the ones with more and stronger connections, exercising and connectivity function, and with the shortest paths to other nodes influencing them quickly. In No ADHD group, were 13, 1, and 9. CONCLUSIONS: The network comparison test for global strength showed that the ADHD network was more connected than the No ADHD (global strength of 10.21 vs 8.26), those differences are not statistically significant (p= 0.075). The network structure test revealing that networks did not differ across groups (p= 0.859). This implies that the overall relationships among BDI-1A symptoms is the same in ADHD and No ADHD groups, so the structure of networks was similar. However we think that with a higher sample we may find that the networks are different. We find this new approach to network analysis of psychopathology of interest since it can offer relevant perspectives when planning and directing therapeutic interventions.

No. 6
Importance of Visual and Verbal Learning Memory in the Early Stages of Alcohol Use Disorder in Recovering Veterans
Poster Presenter: Harkirat Kaur
Co-Author: Bharath Muppala

SUMMARY:
Background: Verbal learning memory is an essential cognitive function required for new learning. In individuals with long term Alcohol Use Disorder (AUD), a published study reported that more than 50% of Veterans (N = 28) in the early phase of recovery from AUD had significant declines in verbal learning from what would be expected based on premorbid IQ estimates and many had declines in visual learning. Here, we examined visual and verbal learning impairments in early recovery for a new sample of 27 Veterans with AUD. Methods: Participants were Veterans who were within 30 days of abstinence and completed assessments including the Hopkins Verbal Learning Test (HVLT) and the Brief Visuospatial Memory Test (BVMT). Participants' premorbid IQ estimate was determined by the Wechsler Test of Adult Reading. Impairment was characterized by a participant's HVLT or BVMT score falling 1 SD below what would be expected based on premorbid IQ estimate.

No. 7

An RCT of Cognitive Remediation and Work Therapy in the Early Phase of Substance Use Disorder Recovery for Older Veterans: 12-Month Follow-Up

Poster Presenter: Harkirat Kaur
Lead Author: Bharath Muppala

SUMMARY:

Background: Cognitive Remediation Therapy (CRT) has been reported to improve neurocognitive and SUD outcomes in residential treatments. A previous RCT report described 6-month outcomes on CRT as an augmentation to outpatient treatment. Findings showed excellent SUD outcomes, with 94% being sober in the 30 days prior to 6-month follow-up. Differential neurocognitive outcomes but not SUD outcomes were found by Condition. This report presents SUD results at 12-month follow-up. Method: Recovering outpatient US Veterans were randomized into CRT+ Work Therapy (WT) (n= 24) or WT only (n = 24) along with Treatment-as-Usual. A retrospective chart review was used to rate a Clinical Global Impressions (CGI; ICC r>0.95) on 43/48 participants with up-to-date medical records. Results: 24/43 (55.8%) had the highest possible CGI score indicating continuous sobriety and improved quality of life and 30/43 (69.8%) had favorable outcomes. Condition differences were not significant, although cognitive training hours was related to CGI scores (r = 0.45, p<0.05). Conclusions: All engaged in WT and most had favorable outcomes at 12 months. No CGI differences were found by Condition, but a significant relationship was found with amount of cognitive training, suggesting that CRT added benefit for those who engaged in it.

No. 8

Patients With Cannabis Dependence and Comorbid Antisocial Personality Disorder: Clinical and Sociodemographic Characteristics

Poster Presenter: Alain Dervaux, M.D., Ph.D.
Co-Authors: Xavier Laqueille, Marie-Odile Krebs

SUMMARY:

Introduction: In the NESARC Study, the prevalence of antisocial personality disorder (ASPD) in cannabis dependence was higher than in general population (OR=18.7 [95% CI: 14.79-23.54] [Compton et al., 2005]. Persistent cannabis dependence was predicted by ASPD in the 3-year course NESARC Study [Hasin et al. 2011]. No study investigated ASPD correlates in patients seeking treatment for cannabis dependence, without severe mental illness. The objective of the present study was to address comorbid antisocial personality disorder (ASPD) in patients with cannabis dependence. Methods: In a sample of consecutively outpatients seeking treatment for cannabis dependence (DSM-IV criteria) from a substance abuse department in Paris, France, a group of patients with ASPD (n=60) was compared to a group of patients without ASPD (n=180). Patients with psychotic disorders, bipolar 1 disorder, current opioid or cocaine dependence were excluded of the study. The patients were assessed using the Diagnostic Interview for Genetic Studies (DIGS 3.0/DSM-IV diagnoses) and the Global Assessment of Functioning (GAF) scale. Withdrawal symptoms and subjective effects to cannabis were collected using a specific 26-item questionnaire. Results: There were higher rates of lifetime alcohol use disorders in the group of patients with both cannabis dependence and ASPD, compared to the group with cannabis dependence without ASPD (35.0% vs 16.1% respectively, khi2=9.74, p=0.002), higher rates of history of legal problems (71.2% vs 48.9% respectively, khi2=8.91, p=0.003), higher rates of compulsory treatment (13.0% vs 4.6% respectively, khi2=4.69, p=0.03). In the ASPD group, there were lower mean level of education (years, mean± SD: 11.3±2.5 vs 13.7±3.0, t-test Student, t=5.53, p=0.0001), mean age of onset of cannabis use (years, mean± SD: respectively 14.5±2.7 vs 16.0±2.6, t-test Student, t=3.83, p=0.001), mean age of onset of daily tobacco use (years, mean±SD: 15.5±2.5 vs 16.5±2.7, t-test Student, t=2.45, p=0.001, and GAF scores (61.7±10.4 vs 67.7±8.7, t-test, t=4.28, p=0.0001). There was no difference between the groups of patients with or without ASPD regarding marital status, rates of history of anxiety disorders, rates of history depressive disorders, rates of suicide attempts, rates of familial histories of substance abuse/depression/suicidal attempts, rates of previous anxiolytic or antidepressant treatments, average number of cannabis joints per day, withdrawal symptoms, and subjective effects while intoxicated, except for anxiety induced by cannabis

use which was found less frequent in the in the ASPD group (10.0% vs 24.4%, respectively, khi2=5.69, p=0.02), sensations of slowed time less frequent in the in the ASPD group (38.3% vs 59.8%, respectively, khi2=8.33, p=0.004). Discussion/Conclusions: Patients with cannabis dependence and ASPD presented more alcohol use disorders comorbidities, and more severe global functioning, compared to their counterparts without ASPD.

No. 9

The Profile of Cognitive Impairments in Chronic Ketamine Users

Poster Presenter: Ni Fan, M.D., Ph.D.
Co-Author: Hongbo He, M.D., Ph.D.

SUMMARY:

Objectives: To examine cognitive function in chronic ketamine users. Factors correlated to cognition impairments were analyzed. Methods: Sixty-three chronic ketamine users and 65 healthy subjects were recruited. Cognitive function was assessed by using immediate/delayed visual reproduction (IVR/DVR) tasks, immediate/delayed logical memory (ILM/DLM) tasks, the Stroop test, the Wisconsin card sorting test (WCST), and the continuous performance test (CPT). Psychological symptoms were assessed with the Positive and Negative Syndrome Scale (PANSS), Beck Depression Inventory (BDI) and Beck Anxiety Inventory (BAI). Univariate general linear model was implemented to compare the cognitive function between the two groups. Multiple linear regression models were employed to analysis the impact factors on cognition. Results: Ketamine users performed worse than healthy controls on the IVR, ILM, DLM, Stroop and auditory CPT tests ($p < 0.05$). IVR ($F=5.074$, $p=0.028$) and DVR ($F=5.637$, $p=0.021$), color-naming ($F=4.358$, $p=0.041$) and color interference-reading ($F=4.613$, $p=0.036$) scores were positively correlated with education level. ILM scores were negatively correlated with the negative subscale of the PANSS ($F=7.099$, $p=0.010$). DLM score was positively correlated with average dose of ketamine use ($F=8.189$, $p=0.006$). Word reading score ($F=5.310$, $p=0.008$) was positively correlated with education level, and negatively correlated with duration of ketamine use. False hits in the auditory CPT was positively correlated with duration of ketamine use ($F=5.260$, $p=0.026$). Number of trials required to complete the first category ($F=13.679$, $p=0.001$) and perseverative errors on the WCST ($F=6.078$, $p=0.017$) were positively correlated with the time lag of the test. Conclusions: Chronic ketamine users had cognitive impairments across multiple domains.

No. 10

The Perils of Self-Prescribing: A Case of High-Dose Zolpidem Dependence and Successful Detoxification in a Physician

Poster Presenter: Natalia Santos
Lead Author: Fernanda Timmermann
Co-Authors: Natalia Santos, Karine Paula Homem Rebolo, Leonardo De Jesus, Mariana Keller

SUMMARY:

T.M.F, female, 27-year-old, medical doctor, reached psychiatry hospitalization after 2 attempts of discontinuation a high-dose use of zolpidem followed by severe adverse withdraw events such as seizure. Patient began to take 30 to 60mg of zolpidem in the final year of medical school initially only to get to sleep after night shifts and later also to stay more relaxed throughout the day. She gradually increased the dosage to 1200 to 3000mg per day, mainly through self-prescribing, over the last 3 years. She reported subjective effects of relaxation, euphoria, intense craving, and inability to stop use, leading to medical discharges from the residency program, which she had previously been able to enter. The first attempt of discontinuation was made without medical monitoring with an abruptly suspension of the substance and the second one was in a psychiatric outpatient service with a progressive zolpidem de-escalation. Both attempts leaded to anxiety, global insomnia, restlessness, and tonic seizure. On the third attempt, we applied successfully a cross-titration regimen using an adequate equivalent diazepam dose as a substitute. Conclusion: Initial reports showed minimal abuse potential for zolpidem. However, multiple reports have appeared of tolerance, abuse and dependence. Harms from this drug long-term abuse need to be well-characterized and standard detoxification methods established. The study aim is to review literature, analyze the psychopathology involved and compare the methods already used.

No. 11

The Impact of Childhood Maltreatment on Onset Age of Alcohol Use Disorder in Women Seeking Treatment

Poster Presenter: Fides Schuckher
Co-Authors: Ingemar Engstrom, Tabita Sellin, Claudia Fahlke

SUMMARY:

Background Previous studies have shown that exposure to childhood maltreatment among women may increase the risk of developing alcohol use disorder. There is, however, a lacking knowledge whether exposure of childhood maltreatment also have an impact on onset age of alcohol use disorder (AUD) in women. We investigated if exposure to different types of childhood maltreatment was associated with onset age of AUD among socially stable women seeking treatment. An additional aim was to study if exposure to more than one type of maltreatment was linked to onset age. Method Women with alcohol use disorder (n=75) seeking treatment for alcohol problems at a treatment unit for AUDs were included. The mean age of the patients included was 50.5 (SD11.7) years with a range of 25-72 years. About 51% of the women were cohabitant. Approximately 76% of the patients worked full or part-time and 17 % were retired. The patients were interviewed by using Addiction Severity Index (ASI) and Mini International Neuropsychiatric Interview (MINI) and they also filled out the Childhood Trauma Questionnaire-short form Results Emotional abuse, sexual abuse and multiple childhood traumas were associated to earlier onset of AUD. Multivariable linear regression analysis showed that the strongest predictor for an early onset of AUD was exposure to emotional abuse in combination with mother's alcohol/drug problems which may lower the age of onset of AUD with about 15 years. These two variables could explain the variance of the development of earlier onset of AUD by 19%. Conclusion Our findings implicate the need for increased clinical attention to subgroups with comorbid childhood maltreatment, especially emotional abuse and also to offer support in the patient's own parental role.

No. 12

Correlation Between Precontemplation and Alpha Activity in Gambling Disorder

Poster Presenter: Seoyoung Yoon
Lead Author: Geun Hui Won
Co-Authors: Seoyoung Jang, Hyeok Jun Jang, Tae Young Choi, M.D., Jun Won Kim

SUMMARY:

Background: Gambling disorder is a psychiatric condition characterized by persistent maladaptive gambling that causes economic problems and significant disturbances in personal, social, or occupational functioning. In the present study, we evaluated the characteristics of the resting-state electroencephalogram(EEG) in patients with gambling disorder. In addition, we explored the association between their EEG characteristics and stages-of-change in a transtheoretical model. Methods: All participants were men who visited a gambling disorder clinic in Seoul, Korea. Demographics and clinical data of the participants were gathered. Questionnaires including the Readiness to Change Questionnaire were carried out to measure the participants' stage-of-change. Resting-state EEGs were recorded and the power of the four frequency bands, i.e.,delta, theta, alpha, and beta, was analyzed. The data from each participant were converted to z-scores based on the NeuroGuide normative database. Participants were grouped based on the Ward's method for cluster analysis. The variables used, in the analysis, were the absolute and relative power of 19 electrodes. Independent sample t-test was used to evaluate group differences in the demographic, clinical, and EEG recording data. To assess the relationship between the clinical data and EEG recordings, we used Pearson's partial correlation analysis that controlled for age and education. Results: Overall, 63 male participants, who were diagnosed with gambling disorder were enrolled. Cluster analysis revealed two clusters: gambling disorder with increased alpha power (group1) and with normal alpha power (group2), compared to the normative database. Group1 had significantly higher alpha power compared to group2, at all electrodes. No significant differences were observed in demographic and clinical data between the two groups. We found that the precontemplation score of RCQ was positively correlated with the z-score of

the relative alpha power in almost all cortical regions(r=0.402,p=0.002). Conclusion: This study revealed that EEG parameters, especially the alpha activity, could inform us about the subtypes or stages-of-change in gambling disorder. The higher level of alpha activity was associated with the precontemplation stage. In the transtheoretical model, precontemplation is characterized by an absence of intention to change and a lack of awareness of the problem. High scores on precontemplation were associated with lower levels of gambling severity and therapeutic change, as well as the premature withdrawal from therapy. In clinical settings, the stages-of-change model could be used to assess the current severity of problem gambling and to predict the treatment course and outcome; however, its assessment depends exclusively on a self-report scale. This study suggests that the level of alpha activity could be utilized as an additional parameter to help clinicians in assessing and treating patients with gambling disorder.

No. 13

The Burden of Illicit Drug Use Disorders in the United States From 1990 to 2016: An Analysis From the Global Burden of Disease Study 2016

Poster Presenter: Ghazal Vakili
Co-Author: Shahrzad Bazargan-Hejzi

SUMMARY:

We used data from the Global Burden of Disease, injuries and risk factors study (GBD) 2016 to estimate the burden of Drug use disorders in the United States in a time frame of 1990 to 2016. The measurements were done in terms of Disability-adjusted life years (DALYs), Years of life lost to premature mortality (YLLs) and years lived with disability (YLDs). We systematically reviewed epidemiological data for Drug use disorders including: (Opioids, Amphetamine, Cocaine, Cannabis and the other DUDs) in the U.S. and used a software tool known as DisMod-MR (Disease Modeling – Meta-regression) which is used in GBD studies to quantify deaths from each cause by age, sex, country, and year, to estimate the population-level prevalence of Drug use disorders in the U.S. GBD 2016 calculated new disability weights by use of representative community surveys and an internet based survey. In this paper we derived the DALYs, YLLs and YLDs for each Drug Use Disorder; all ages, both sexes and adjusted with unit of rate, unlocked scale rate of change and the observed value at the level 4 of Tree-map settings and finally obtained the results with the Percentage of Annual Change (ACP) for each parameter separately. DUD in the U.S. accounted for 4.11% of United States all-cause DALYs (3.54%- 4.61%) ACP 1.37% and 5.43% of total YLDs (4.2-6.55%) ACP 0.062% and 2.99% of total YLL (2.85-3.11%) ACP 5.27%. Opioid use disorders accounted for 2.67% of United States all-cause DALYs (2.14%- 3.13%) ACP 1.14%, and 3.83% of total YLDs (2.88-4.82%) ACP 0.041% , and 1.68% of total YLL (0.8-1.86%) ACP 5.23%. Cocaine use disorders accounted for 0.4% of the United States all-cause DALYs (0.32-0.51%) ACP 1.3%, and 0.55% of total YLDs (0.4-0.73%) ACP 0.072%, and 0.27% of total YLLs (0.2-0.45%) with ACP 5.57%. Amphetamine use disorders accounted for 0.19% of United States all-cause DALYs (0.15-0.26%) ACP 1.85%, and 0.23% of total YLDs (0.16-0.33%) ACP 0.032%, and 0.15% of total YLLs (0.12-0.25%) ACP 8.13%. Cannabis use disorders accounted for 0.83% of the U.S. all-cause DALYs (0.059-0.11%) ACP 0.051% and 0.18% of total YLDs (0.14-0.23%) ACP 0.051%. All the other drug use disorders accounted for 0.77% of the United States all-cause DALYs (0.65-1.11%) ACP 2.46%, and 0.62% of total YLD (0.48- 0.78%) ACP 0.23%, and 0.9% of total YLLs (0.78-1.52%) ACP 4.93%. Illicit drug use disorders which also known as Substance use disorders, Substance abuse or Addiction, affect a lot of American from all walks of life. It is defined as continued use of drugs despite trying to stop and/or causing harm to self or others. Fortunately there are proven ways to make a difference in this epidemic. The following strategies address this issue and demonstrate how to stop the epidemic: Save lives and reduce drug use disorders-related illnesses and homelessness, Improve access to evidence-based treatments, Improve DUD-care by changing the systems and policies, Fund innovation to improve prevention and treatment.

No. 14

Craving Beliefs and Beliefs About Substance Use in Heroin Addicts Correlate With Accompanying Depressive Symptoms: A Validation Study

Poster Presenter: Hale Yapici Eser, M.D., Ph.D.

SUMMARY:
Background: Substance abuse is a public health problem that can be treated by combinations of psychotropic medications and a variety of psychotherapy options, including cognitive behavioural therapy. Identifying the cognitions associated with craving and substance use would be important guiding rules for the treatment. In this study, we aimed to validate Turkish version of two major scales 'Beliefs about substance use' and 'Craving beliefs questionnaire' in heroin addicts and define the interaction of these beliefs in patient profile, depression and anxiety symptoms. Methods: 176 heroin addicted patients and 120 healthy controls recruited from a population sample were evaluated with Craving Beliefs Questionnaire (CBQ), Beliefs about Substance Use Questionnaire(BSU), Beck Anxiety Inventory (BAI), Beck Depression Inventory (BDI) and Sociodemographic Data Questionnaire. Patient and control group were matched for age, sex and income level. Patient group was also evaluated with Addiction Profile Index. Groups were compared for scores on CBQ, BSU , API subscores by t-test and other sociodemographic variables by Chi-Square test. Linear regression analysis was conducted to evaluate the determinants of BSU and CBQ scores. Results: Cronbach alpha level was 0.93 for BSU and 0.94 for CBQ. Patient group showed significantly higher CBQ, BSU, BAI and BDI scores ($p<0.001$). BSU score significantly correlated with BAPI-substance use, BAPI-diagnosis, BAI, BDI and CBQ ($p<0.005$). CBQ scores significantly correlated with BAPI-diagnosis, BAPI-impact on life, BAPI craving, BAPI- total score, BSU, BAI, BDI and amount of cigarette smoking ($p<0.002$). Number of previous treatments and age of onset were not correlated with either BSU or CBQ. Patients with a substance use in the last month significantly reported higher CBQ scores unrelated to a spesific substance, but BSU scores were not different. Patients reporting heroin as the substance they used for the longest time, had lower mean CBQ scores compared to others ($p=0.016$). BAI and BDI scores significantly predicted BSU scores, however only BDI scores correlated with CBQ scores ($p<0.003$). Conclusions: We could validate Turkish version of both scales in heroin addicted patients. Craving beliefs were highly correlated with addiction profile. Anxiety and depression are significant modulators for patients believes about substance use and depression is a modulator for craving. Craving beliefs may provoke current substance use. Treatment options for substance abuse should not only include cognitions but also other mood symptoms. Further studies with larger sample sizes and focusing on the effect of anxiety and depression treatments on the substance related cognitions are needed.

No. 15

Is Kratom a Partial Solution to Our National Opioid Crisis? A Case Report

Poster Presenter: Jonathan Browning, M.D.

SUMMARY:
The opioid epidemic has resulted in hundreds of thousands of deaths by overdose and resulted in an even larger number of patients addicted to opioids. Medications to decrease cravings have been relatively ineffective. Replacement therapies such as Methadone and Suboxone are helpful for some, but their impact on the nation's problem has been limited. Kratom is a plant that has has been used in southeast Asia for hundreds of years with use in opioid withdrawal and opioid replacement. The substance is being used more and more in the US, yet most mental health professionals are unaware of the substance. Research is limited at this time, but suggests there may be potential for kratom in opioid detox or maintenance therapy. In this presentation, we report the case of a 29-year-old Caucasian male with history of chronic pain and depression who presented to reestablish outpatient psychiatric care after a recent move. His depression was relatively stable, and he had been on treatment with fluoxetine 20mg daily for several years. Patient denied substance use in interview until mother mentioned that he used kratom daily. He had begun taking it for pain about one year prior when coming off prescribed opiates which he had taken for about two years. At that time, he was suffering from opiate withdrawal and discovered on an online forum that others were using kratom for opioid detox. The patient was able to successfully detox from hydrocodone and oxycodone. By continuing to take kratom, he in effect started opioid replacement therapy and continued maintenance dosing. Patient also reported that kratom helped manage his

depression and anxiety. Kratom has been proven to help people through opioid detox and has helped people get off of harder or illegal substances. Those who continue to use kratom for maintenance appear to have higher social functionality than those using other drugs. There are also more limited adverse effects in part because of its distinctive pharmacological profile. Withdrawal can be seen with discontinuation but is often mild in comparison to that with classical opioids. More studies are needed to determine if there are any long-term effects of daily kratom use. However, there is evidence to support that kratom may play a role in fighting the opioid epidemic.

No. 16

A Silent Suffering: Substance Abuse in the Elderly

Poster Presenter: Juliana Yokomizo
Co-Author: Ana Clara Schreiner

SUMMARY:

BACKGROUND: The elders from nowadays are the ones who were young during the post-world war. This cohort had a close access to drugs more than previous generations and brought behavioral and cultural changes which had an impact on the whole western world. There are only a few studies regarding the profile of elders with substance abuse and available interventions in health care. METHODS: This is a systematic review conducted on Google Scholar and Pubmed databases and collected papers from 2013 to 2017 with the key-terms "Substance abuse" AND "aging" OR "elderly" OR "older" in the title. 25 articles were selected. Inclusion criteria were: 1) articles fully available online; 2) available in Portuguese or English; 3) comprising a sample of >50y of age. Exclusion criteria were: 1) articles whose main objective were not directly related to the aim of this review; 2) articles from knowledge areas other than healthcare. RESULTS: The profile of elderly alcohol abusers are men, married, high educational leveled and tobacco-smokers. The profile of elderly who abuse of general substances is low educational leveled, low income, unemployed, lives alone and has some type of psychiatric comorbidity. The use of controlled medications increase as the individual is older, provided by regular medical visits because of the various diseases often present in aging, and is related to a higher risk of falls and accidents when associated with alcohol abuse. The motivators for the abusive behavior are distinct from those more prevalent in the youngers: pain, the offer of medical prescriptions, financial and personal losses, depression, role changes in family, bereavement, a decrease of physical exercises routine and feelings of boredom, social isolation, and psychological conflicts. Regarding healthcare interventions, there is a reduced offer of programs developed for this cohort. Misdiagnosis is caused by a cultural misconception that only young people do drugs and the fact that some clinical symptoms of substance abuse are common in other conditions more prevalent in aging, such as tremor, balance loss, cognitive impairment). Also, approaches are often designed for a younger population, focusing on perspectives and future plans, consequences and long-term interests, which might not be effective for elders. CONCLUSION: Despite common sense, elders are not more exempt than youngsters in substance abuse. The motivators seem to be distinguished according to their life period. Further studies are required to better understand the events of life and socio-demographical profiles more prone to abuse. Interventions focused on this population should take into account their needs and psychological/ cognitive/ physiological status.

No. 17

Cannabis and Suicide: A Review of Risk

Poster Presenter: Kristen Anne Schmidt, M.D.
Co-Author: Timothy W. Fong, M.D.

SUMMARY:

Background: Cannabis has been previously reported as the most common illicit substance detected on toxicology screens of persons who completed suicide (Darke et al 2009). As cannabis access, availability and policies evolve, it becomes more critical to identify subpopulations of cannabis users who are most at risk for suicide. A review of the current literature will inform current best practices and identify further areas of study. Methods: A detailed Pubmed and Google Scholar search was conducted to identify relevant publications related to cannabis and suicide during the period between 1990 and 2017. Keywords searched included: cannabis, marijuana, and suicide. Publications were then

grouped into the following categories for examination and review: 1. dual diagnosis (6 papers); 2. adolescent use (11 papers); 3. medical marijuana (4 papers); 4. epidemiology (7 papers). Results: Most of the literature suggests that there is a relationship between cannabis use and suicide that is moderated by multiple variables. Specifically, early cannabis initiation, frequent use, social anxiety, depression, hopelessness, and psychosis are key clinical factors that may increase suicide risk in cannabis users. Conclusions: As cannabis laws change, clinicians need to become aware of patients who are at high risk to incur detrimental outcomes with the use of cannabis. Greater efforts should be undertaken by physicians to screen such patients for suicide and provide informed consent about cannabis risk. Much more needs to be examined about the relationship between cannabis use and the initiation, maintenance or reactivation of suicidal thoughts, feelings or behaviors.

No. 18

A Digital Therapy for Substance Use Disorder (SUD), reSET, Demonstrates Dose-Dependent Improvement in the Clinical Outcome of Abstinence

Poster Presenter: Yuri Maricich, M.D.
Co-Authors: Hilary Luderer, Ph.D., Katherine Coolidge, Aimee Campbell, Ph.D., Edward Vernon Nunes, M.D.

SUMMARY:
Background: Substance use disorder (SUD) is a chronic, relapsing disease that impacts >20 million people in the US1. Treatment retention is one of the best predictors of positive outcomes; however high attrition rates limit effectiveness. Patient engagement and satisfaction with treatment increases retention and improves outcomes. reSET® (academic name Therapeutic Education System, hereafter reSET), the first FDA-cleared prescription digital therapeutic for SUD, delivers a digitized version of the community reinforcement approach + contingency management (CM) and has demonstrated improved outcomes across a range of substances and clinical settings. Patient acceptability of and satisfaction with reSET has been shown; however, the relationship between reSET dose/engagement and clinical outcomes has not been explored. Methods: Dose/engagement was evaluated for patients receiving 12 weeks reSET in a multi-site randomized controlled effectiveness trial who reported alcohol, cannabis or stimulants as their primary substance of abuse. Participants (n=206) were asked to complete 4 reSET modules/week and were eligible for CM rewards for module completion. For each patient, dose/engagement was defined as module completion, total abstinence (TA) was defined as the % of all urine drug screens negative, treatment retention was defined as last face to face contact and appointment attendance was defined as the % of study visits attended. A linear regression model was used to evaluate the relationship between dose and abstinence or appointment attendance. A logistic regression model was used to evaluate whether dose/engagement in the first 6 weeks of treatment predicted retention. Results: Patients completed a mean 38 of the 48 (80%) recommended modules. Dose correlated with abstinence (R^2=0.21, p<.001). Participants who completed 50-62 modules, had the highest average TA of 84% (p=.005), participants who completed 30-49 modules had TA of 71%, while participants who completed less than 30 modules had TA of only 36% (p=.005). A strong correlation between module completion and appointment attendance was also observed (R^2=0.63, p<.001). Individuals who completed 24 or more modules (i.e., recommended dose) in the first 6 weeks of treatment (n=190) were over 3 times more likely to complete the entire 12 weeks than patients who completed fewer than 18 modules (OR=3.28, p=.003). Conclusions: Data demonstrate a neurobehavioral impact of reSET: dose (module completion/engagement) correlated with improved treatment outcomes and early engagement is an indicator of treatment retention. Results are compelling as they show a relationship between empirical evidence (module completion) and objective outcome measures (abstinence and retention). Demonstrating the importance of reSET dose on the likelihood of achieving clinically meaningful outcomes, identifies a clinical practice recommendation that can be used to manage patients' use of reSET.

No. 19

A Controlled Study Evaluating THRIVE™, a Prescription Digital Therapy Used as an Adjunct to

Atypical Antipsychotic Treatment for Schizophrenia
Poster Presenter: Yuri Maricich, M.D.
Co-Authors: Justin Taylor Baker, M.D., Ph.D., Hilary Luderer, Ph.D.

SUMMARY:
Background: Schizophrenia (SZ) is a severe, chronic psychotic disease, more common than Alzheimer's disease and insulin dependent diabetes, with a US lifetime prevalence near 1%. SZ is a major cause of disability in the developed world. While the first line treatment for SZ is antipsychotic medication, treatment guidelines recommend adjunctive neurobehavioral/psychosocial interventions to manage symptoms, promote medication adherence, build skills and prevent relapse. However, guideline implementation is highly variable as adjunctive interventions are highly resource intensive, suggesting software-based neurobehavioral interventions could have tremendous utility for improving SZ outcomes and lessening the global disease burden by offering standardized behavioral interventions more consistently over large populations. THRIVE™ is a digital therapeutic for SZ delivered via mobile devices. Prior studies in THRIVE's precursor (FOCUS) demonstrated statistically significant improvement in symptoms and engagement by patients with schizophrenia over time, suggesting possible efficacy as adjunctive therapeutic in a larger, more definitive trial. Methods: To assess the efficacy and safety of THRIVE as an adjunct to atypical antipsychotic pharmacotherapy in a controlled setting, a multi-center, patient-blind, randomized controlled trial will be conducted in 150 patients with a DSM-V SZ diagnosis, mild-to-moderate symptoms as measured by the Positive and Negative Syndrome Scale (PANSS), and on a stable dose of atypical antipsychotic medication. Participants aged 18 to 60, who own a smartphone and able to use common applications, will be randomized to receive 12-weeks of either: (1) Clinician-directed pharmacotherapy + THRIVE delivered via mobile device; or (2) Clinician-directed pharmacotherapy + Sham control delivered via mobile device. THRIVE consists of therapeutic content intended to treat SZ symptoms (e.g. hallucinations), assess symptoms and medication adherence, and assist with goal setting; the Sham consists of non-active content (e.g., symptom assessments). Change in symptoms over baseline will be measured by PANSS to determine if participants who receive THRIVE show greater improvement over baseline, compared with participants who receive the Sham. Primary endpoints are: (1) Absolute numerical change in PANSS score at week 12 compared to baseline; and (2) Treatment retention: last face-to-face contact during treatment. Secondary endpoints include medication adherence, user satisfaction, and safety (adverse events in Thrive and Sham groups). Conclusions: To our knowledge, this will be the first controlled study to assess the efficacy and safety of a prescription digital therapeutic to treat SZ in conjunction with physician directed pharmacotherapy. If THRIVE enhances the efficacy of pharmacotherapy, is safe, and has high satisfaction among patients, it may represent an attractive combination with standard pharmacotherapy.

No. 20
Distinguishing Quantitative Electroencephalogram Findings Between Generalized Anxiety Disorder and Panic Disorder
Poster Presenter: Ho-Suk Suh

SUMMARY:
Objectives: Generalized anxiety disorder(GAD) and panic disorder(PD) are common diagnoses in anxiety disorders. However, it is difficult to distinguish GAD from PD. Neurobehavioral markers that differentiate GAD and PD would be helpful in ongoing efforts to refine classification schemes based on neurobiological measures. The aim of this study was to determine the distinguishing neurophysiological characteristics between GAD and PD using quantitative analysis of an electroencephalogram(QEEG). Methods: The study included 36 patients with GAD and 25 patients with PD. Resting (eye closed) vigilance controlled EEG recordings were assessed at 64 electrode sites according to the international 10/20 system. QEEG were compared between GAD and PD groups by frequency bands (delta 1-3 Hz, theta 4-7 Hz, alpha 8-12 Hz, beta 12-25 Hz, high beta 25-30 Hz, gamma 30-40 Hz and total 1-40 Hz) made by spectral analysis. Results: The absolute powers of theta and alpha bands at the frontal area differed between GAD and PD group. The absolute power of the theta activity

was decreased in FP1 and FP2 ($p<0.05$) and the absolute power of the alpha activity was decreased in F3 ($p<0.05$) in cases with GAD compared to PD. Conclusions: The differences in QEEG power in our investigation suggest that underlying pathophysiologic mechanisms may be different between GAD and PD. The findings that the decreased absolute powers of the theta and alpha activity at the frontal area in GAD may be the main neurophysiological characteristics of the GAD.

No. 21

Agoraphobia Treatment With Virtual Reality in a General Hospital Outpatients

Poster Presenter: Maria Isabel Vasquez Suyo, M.D.

SUMMARY:

Introduction: Virtual reality (VR) has proven effective in treating anxiety and phobias, including agoraphobia, close the gold standard (in vivo exposure) with less cost and logistical problems. In our country, experience of VR use or research with objective measures of anxiety and manifestations in the body are not found. The aim of the study is to determine whether treatment of agoraphobia with RV is effective in patients from Arzobispo Loayza National Hospital 2015 (50%), comparing its effectiveness with other studies and determine whether patients have side effects (cibersickness) as other realities. Methods: The sample consisted of 15 patients of both sexes with clinical and scales diagnosis of agoraphobia. Subjects were exposed to virtual reality environments generated by Psious application for Virtual reality and were recorded skin conductance and scale of subjective units of anxiety (SUDS) while the patient was exposed to virtual environment that provoke anxiety; they was measured by 5 sessions. Results: All patients had at least 50% ofclinical improvement and reduction in microsiemmens conductance measurement and SUDS: Six patients improved more than 7550%, with statistically significant results. Only one patient suffer cibersickness and other had headache. Discussions: Results correspond to findings in other countries about the effectiveness. It's an interesaant alternative for phobia treatment. It is suggested that new studies expanding the sample and including other phobias and anxiety.

No. 22

CYP 2C19 Genetic Polymorphism Influences the Early Response of Sertraline Treatment Among Chinese Patients With Panic Disorder

Poster Presenter: Xiangxin Liu

SUMMARY:

Background: Cytochrome P450 2C19 (CYP2C19) is a polymorphic enzyme active in the metabolism of sertraline, a widely used to treat patients with panic disorder (PD), however the relationship between genetic polymorphisms in CYP2C19 and the treatment response to sertraline in Chinese Han patients with PD remains unclear.Data on the predictors of early response in treatment for PD are scarce. Methods: 108 patients with PD were recruited at inpatient department in Guangdong general hospital from December 2015 to July 2017 and assessed by the Hamilton Anxiety Scale (HAMA-14) and the Panic Associated Symptom Scale-Chinese Version (PASS-CV) at baseline and biweekly over 8 weeks of treatment. PD was defined by the Diagnostic and Statistical Manual of Mental Disorder, 5th ed. (DSM-5) criteria. The sociodemographic and physical illness information were collected.All patients were administered a fixed dose of 100 mg/day sertraline. Three CYP2C19 metabolizer phenotypes were analyzed by PCR-genotyping microarray, including extensive metabolizers (EMs CYP2C19*1/*1), intermediate metabolizers (IMs CYP2C19*1/*2, *1/*3), and poor metabolizers (PMs CYP2C19*2/*2, *2/*3, *3/*3). Results: Treatment response was based on the reduction of HAMA-14 and PASS-CV compared with the baseline. This prospective, real-world study showed that the proportion of PMs was lower (11.8% vs. 44.9%), but higher response ratios of HAMA-14 and PASS-CV than in EMs on the treatment response at week 2 and 4, and no significant differences were found at week 8 ($p<0.01$, $p<0.05$ and $p>0.05$, respectively); also, similar response ratios of PASS-CV in PMs than in EMs at week 2 and 4($P<0.05$). Muti-variable logistic regression analysis showed that CYP2C19 EMs and physical comobidity are the risk factors of poor early response of sertraline treatment. Conclusion:The CYP2C19 genetic polymorphism is associated with sertraline treatment response in Chinese Han

patients with PD. CYP2C19 PM may play an important role in early response of sertraline. Routine CYP2C19 genotyping could be recommended to predict sertraline efficacy in PD patients treated in psychiatry settings.

No. 23

Rates of Positive Screens for Bipolar Disorder in Pregnant and Postpartum Women and Their Treatment Participation: A Potential Public Health Concern

Poster Presenter: Grace Masters

SUMMARY:

Background: Bipolar disorder is a severe mental illness which afflicts 3% of the general population and 2-8% of pregnant and postpartum women. Women are at increased risk for new onset bipolar disorder or relapse of disease during the perinatal period. Untreated bipolar disorder has been associated with both poor maternal and infant outcomes. The objectives of this study were to describe rates of pregnant and postpartum women who screen positive for bipolar disorder and their associated risk factors, and their participation in treatment, or lack thereof. Methods: Adult, pregnant and postpartum women were recruited from 14 obstetric clinics in Massachusetts. Primary data were collected via participant telephone interviews consisting of structured interview questions regarding personal obstetric and psychiatric care, in addition to validated screening instruments for depression, bipolar disorder, and substance abuse. Depression screenings were done with the Edinburgh Postnatal Depression Scale (EPDS), where a score of 10 or greater was considered positive. Bipolar disorder screenings were done with the Mood Disorder Questionnaire (MDQ), where scores were dichotomized into positive or negative screens. Substance use screenings were done using the Parents, Partners, Past, and Pregnancy screen (the 4Ps). Results: The analysis included 294 participants, with a mean age of 31.7 5.6 years (range 19-45). Among women with an EPDS ≥ 10 (73/294 = 24.8%), almost one-third screened positive for bipolar disorder (22/73 = 30.1%), or almost one-tenth of the total sample (29/294 = 9.9%). Compared to the overall results, the rate was even higher in women self-reporting as Hispanic (12.8%) and/or as Black (15.8%), and in women with public health insurance (Medicaid or Mass Health, 17.8%). Only one-half of participants with a positive bipolar screen reported that they had received a bipolar diagnosis prior to the screening (51.7%). Less than one-third with a positive bipolar screen reported receiving psychiatric pharmacotherapy (28%) and less than half reported that they were currently participating in psychotherapy (44%). Conclusions: In comparison to previously published literature, positive bipolar disorder screening rates were higher than anticipated in our sample of pregnant women, especially in minority populations and those with public insurance. Less than half of our sample were receiving evidence-based treatment, including psychotherapy and pharmacotherapy. Our data suggest that there is a gap in care that needs to be addressed in order to define appropriate treatment and best care practices and to develop ways to reach and treat these women more effectively. Funding: This study was supported by the Centers for Disease Control and Prevention (Grant Number: U01DP006093) and an award from the UMass Center for Clinical and Translational Science TL1 Training Program.

No. 24

Noradrenaline Plays a Critical Role in the Switch to a Manic Episode and Treatment of a Depressive Episode

Poster Presenter: Masatake Kurita, M.D., Ph.D.

SUMMARY:

Although antidepressants may increase the risk of switching to mania in bipolar disorder (BD), clinicians have been using antidepressants to treat patients with bipolar depression. Appropriate treatments for bipolar depression remain controversial. In BD, antidepressants comprise a double-edged sword in terms of their efficacy in treating depression and the increased risk of switching. This review presents an important table outlining the benefit in terms of depression improvement and the risk of switching in the clinical setting. It also proposes strategies based on the characteristics of antidepressants such as their pharmacology, specifically the equilibrium dissociation constant (KD) of the noradrenaline transporter. This table will be useful for clinicians while considering benefit and risk. Antidepressants

augmenting noradrenaline may be effective in bipolar depression. However, it is easily presumed that such antidepressants may also have a risk of switching to mania. Therefore, antidepressants augmenting noradrenaline will be the recommended treatment in combination with an antimanic agent, or they may be used for short-term treatment and early discontinuation. The corresponding medical treatment guidelines probably need to be reevaluated and updated based on biological backgrounds. From previous studies, we understand that the stability of noradrenaline levels is important for BD amelioration, based on the pathophysiology of the disorder. It is hoped that researchers will reevaluate BD by conducting studies involving noradrenaline.

No. 25

Dynamic Change of Gut Microbiota Characteristics Following Quetiapine Treatment in Bipolar Patients

Poster Presenter: Shaohua Hu, M.D., Ph.D.

SUMMARY:

Objective: The relationship between gut microbiota and bipolar disorder (BD) is still unclear. The aim of this study is to investigate the characteristics of gut microbiota in BD patients, and the dynamic change of gut microbiota following quetiapine treatment. Methods: Totally 72 BD patients and 16 healthy controls were enrolled in the study, the fecal samples of all participants were collected and analyzed the characteristics of gut microbiota with 16S ribosomal RNA (rRNA) gene sequencing. Montgomery-Asberg Depression Rating Scale (MADRS) was used to evaluate the severity of depression. Serum inflammatory profiles, such as cytokines (IL6 and TNF-?) and CRP, were also examined in all BD patients. Meanwhile, all patients received four-week quetiapine treatment (maintenance dose, 200-300 mg/d) for depression. After treatment, the fecal samples and inflammatory profiles were reexamined in 23 of the patients. Results: At baseline, no significant difference of gut microbiota diversity was obsevered in patients and healthy controls. However, the taxonomy composition of gut microbiota was different between the two groups, such as Dorea and Veillonella. Quetiapine treatment did not change the diversity of gut microbiota in BD patients. However, the abundance of Bifidobacterium, Lactobacillus, Klebsiella, Veillonella and Halomonas was more dominated in treated BD patients, while Blautia abundance was more dominated in controls. Following quetiapine treatment, Klebsiella and Brevundimonas abundance was increased, but Blautia abundance was decreased in patients. Regardless of quetiapine treatment, the severity of depression, inflammatory and metabolic markers were closely associated with gut bacteria in BD patients. For instance, Faecalibacterium and Fusobacterium abundance was negatively correlated with MADRS scores. Serum level of IL6 was positively correlated with Enterobacter, Pseudomonas and Leuconostoc abundance, but negatively with Cloacibacillus abundance. TNF-? was positively correlated with Parabacteroides and Bilophila abundance, but negatively with Cloacibacillus abundance. CRP value was positively correlated with Prevotella, Butyricicoccus and Lachnospiracea-incertae-sedis abundance, but negatively with Dorea abundance. In addition, the abundance of Clostrisium XIVa, XIVb and IV, Dorea and Holdemania were all in negative correlation with BMI value. Conclusions: These findings indicated that the taxonomy composition of gut microbiome was significantly changed in depressed BD patients, which was possibly related to the inflammatory, metabolic pathways, the severity of disease, and even the pharmacological treatment.

No. 26

Types of Affective Temperaments Are Differentially Related With Specific Personality Traits in Bipolar Disorders

Poster Presenter: Kyooseob Ha
Lead Author: Tae Hyon Ha
Co-Author: Jae Won Lee

SUMMARY:

Aims: Affective temperaments has been suggested as one of the predispositions of major affective disorders. The purpose of the current study was to investigate the association of affective temperaments with personality disorder traits in subjects with bipolar disorders. Methods: The TEMPS-A short version and Personality Diagnostic Questionnaire (PDQ-4+) were administered to 80 subjects with bipolar disorders. Using the regression

models, relations between affective temperaments and personality disorder traits were tested. Results: PDQ total score was significantly related to cyclothymic and depressive temperament scores. The cyclothymic temperament was most significantly related to borderline (t=4.996, p<0.001) and avoidant personality traits (t=4.152, p<0.001), and depressive temperament to dependent (t=4.041, p<0.001) and avoidant personality traits (t=4.899, p<0.001). On the other hand, the hyperthymic temperament was most significantly related to narcissistic (t=3.713, p<0.001) and histrionic personality traits (t=4.124, p<0.001), and the anxious temperament to narcissistic personality trait (t=2.800, p=0.006). In addition, the cyclothymic temperament was also related to interpersonal hypersensitivity (t=2.350, p=0.01), childhood trauma (t=2.413, p=0.018) and suicide risk (t=2.276, p=0.026). Conclusions: Our results showed distinct relationships between affective temperaments and personality disorder traits. In particular, bipolar disorder spectrum temperaments were differentially linked to cluster B personality traits. When diagnosing personality disorders, possible expressions of bipolar spectrum disorders also should be considered cautiously.

No. 27

Predicting Time-to-Response of Transcranial Magnetic Stimulation (TMS) Treatment in Depression Using Brain Network Activation (BNA)

Poster Presenter: Yechiel Levkovitz
Co-Authors: Revital Shani-Hershkovich, Gil Issachar, Ziv Peremen, Amir Geva

SUMMARY:
Predicting how fast depression patients will respond to TMS therapy is a valuable information for both physicians and patients. Currently TMS treatment is a one-size-fits-all 4 or 6 weeks therapy, depending on the device. Knowing in advance that response may be achieved earlier or later than common practice, may have consequences on treatment selection, individual adjustments as well as economic considerations. The BNA technology involves spatiotemporal characteristics of EEG event related potentials evoked by specific stimuli (Stern et al., 2016). To this end, we tested BNA scores from a cognitive task, as predictors for time-to-response in a group of 36 depression patients that received deep TMS treatment. We found a brain network activation that relates to working memory (in the target condition of an auditory oddball task), which correlated significantly with time of response of the 16 responders. A receiver operating characteristics analysis for differentiating between fast responders and slow/non responders, based on the BNA score of this network, resulted in an area under the curve of 0.796, sensitivity 0.857, specificity 0.714, positive predictive value (PPV) 0.75 and negative predictive value (NPV) 0.83. These preliminary results hold promise for predicting the individual deep TMS treatment length.

No. 28

Changes in Brain Network Activation Associated With Depressive and Cognitive Changes During Acute Treatment With Vortioxetine in Major Depression

Poster Presenter: John Michael Zajecka, M.D.
Co-Authors: Ziv Peremen, Amir Geva, Michael Topel, Ian Mackey

SUMMARY:
A significant unmet need in the management of major depressive disorder (MDD) remains the identification of biomarkers to improve current diagnosis, differential diagnosis, determine full remission, and the potential to predict treatment outcome. Current brain imaging such as fMRI and PET have been demonstrated to be reliable biomarkers for MDD and response to treatment, but have limited temporal resolution and not practical for use in clinical practice. Brain Network Activation (BNA) is a non-invasive technology that uses high density EEG to collect sensory evoked potentials during specific cognitive tasks to generate a referenced brain network model providing information on cortical patterns/connectivity with objective and easily interpretable data. Recent studies demonstrated the potential value of BNA to diagnosis and predict treatment response in neuropsychiatric disorders. Vortioxetine is an antidepressant shown to improve core MDD symptoms. Preliminary data suggests vortioxetine may improve cognitive function in adults with MDD and this effect may be independent of the efficacy of core MDD symptoms. This data suggests that the

impact of vortioxetine on cognition may be independent of the antidepressant effects, possibly through a pathway different from that involved in the resolution of core MDD symptoms. We will present a study design that may address these types of questions and gain insight into individual variability to achieve full remission, while testing the clinical utility of BNA as a non-invasive characterization of human brain function by identifying the timing, order of activation, and dynamic orchestration of brain regions using basic cognitive tasks. We present data on the first 10 subjects, from an ongoing 8-week, open-label trial, using vortioxetine (5-20 mg/day) in adult outpatients (18-65 years old) with MDD and subjective complaints of cognitive dysfunction. BNA data was collected at baseline prior to starting vortioxetine (10 mg with option to reduce the dose to 5 mg for adverse events), another BNA, 2 weeks after treatment (to assess possible prediction of response), and a final BNA after 8 weeks of treatment (following dose increases after the week 2 BNA up to 20 mg, but a stable dose for the last two weeks of the study). All subjects met MDD criteria, MADRS score > 26, and no significant medical/psychiatric comorbity. The primary outcome for antidepressant efficacy was the change from baseline in total MADRS score (secondary outcomes included, HAMD-17 and 28, QIDS-SR, CGI-S/I, pre-defined response and remission criteria). The primary outcome measuring cognition was the change from baseline to endpoint for total number of correct items on the DSST (secondary cognitive and functional outcomes included changes in the CPFQ, PDQ,TMT, Stroop, UPSA, and WLQ). We will present baseline data, and changes from baseline, 2 weeks, and endpoint for BNA and clinical outcomes.

No. 29

Impairment of Resting State fMRI Functional Connectivity in Adolescent-Onset Schizophrenia and Major Depressive Disorder

Poster Presenter: Yixiao Fu, Ph.D.
Co-Authors: Yikang Liu, Jinxiang Tang, Yadong Peng, Nanyin Zhang

SUMMARY:

Many mental disorders emerge in late childhood and early adolescence, among which schizophrenia (SCZ) and major depressive disorder (MDD) have high incidence. Structural and functional abnormalities at a whole-brain scale were found by using MRI in adult patients with schizophrenia or major depressive disorder, which reveal neural substrates underlying the diseases and provide potential biomarkers for diagnosis. However, neuroimaging studies in adolescent-onset patients are still lacking. Furthermore, SCZ and MDD share some common symptoms. Adolescents tend to have atypical symptoms, which affects early discrimination of the two diseases. Therefore, we explored resting state fMRI functional connectivity (FC) in adolescent-onset SCZ and MDD and revealed some relations between them in terms of whole-brain FC patterns. Methods: 206 subjects between the ages of 12 and 19 were recruited for the study, among which 68 were healthy controls; 57 and 81 were diagnosed with schizophrenia and major depressive disorder respectively with criterions in DSM-IV. Patients were untreated or treated for less than two months. MRI images were acquired by a 3T scanner (Signa, GE Medical Systems, Waukesha, WI, USA) at the First Affiliated Hospital of Chongqing Medical University. High-resolution T1 structural MRI images and resting state fMRI images were acquired. Functional connectivity (FC) between predefined regions of interest were calculated and compared between the three groups. Results: Both SCZ and MDD group showed large-scale FC decrease involving prefrontal cortex, occipital cortex, temporal cortex, cingulate cortex, hippocampus, thalamus, and striatum. Moreover, we observed decreased FC in the default mode network as well as the dorsal stream and ventral streams of visual and auditory processing in both SCZ and MDD groups. SCZ group showed less FC decrease in the prefrontal cortex compared to MDD group. Conclusion: There are many shared symptoms between SCZ and MDD such as hallucination, perceptual and sensation disorders, and delusion. Moreover, adolescents with SCZ or MDD tend to have atypical, momentary, and changing symptoms, which affects early discrimination between the two diseases. Similar FC impairment patterns including the DMN and sensory processing circuits may explain the phenomenon and reveal common neural substrates of the two diseases during adolescent development. Furthermore, FC difference in the prefrontal cortex

were observed, which might help with early discrimination of SCZ and MDD. This research was supported by Medical Scientifc Research Program of Chongqing Health and Family Planning Commission?2016SXM010, Program of Chongqing Science and Technology Commission cstc?2016shmszx130051?

No. 30

Effectiveness of Long-Term Lurasidone in Children and Adolescents With Bipolar Depression: Interim Analysis at Year One of a Two-Year Open-Label Study

Poster Presenter: Melissa DelBello
Co-Authors: Robert Goldman, Michael Tocco, Andrei Pikalov, Ling Deng, Antony David Loebel, M.D.

SUMMARY:

Background: Bipolar I disorder frequently has an early onset, with an estimated prevalence rate of 1.8% in pediatric populations. Early onset is associated with a high degree of chronicity, however, limited data are available on the long-term effectiveness of drug therapies in this pediatric population. The aim of the current study was to evaluate the long-term effectiveness of lurasidone in children and adolescents with bipolar depression. Method: Patients 10-17 years with a DSM-5 diagnosis of bipolar I depression were randomized to 6 weeks of double-blind (DB) treatment with lurasidone or placebo (1). The primary efficacy measure was the Children's Depression Rating Scale, Revised (CDRS-R). Patients who completed the study were eligible to enroll in a 2-year, open-label (OL) extension study in which patients were continued on flexibly-dosed lurasidone (20-80 mg/d), or switched from placebo to lurasidone (all patients in the extension study were started on a dose of 20 mg/d). These data are the 1-year interim analysis results of the 2-year study. Treatment response was defined as ?50% reduction from DB baseline in the CDRS-R total score; remission was defined based on the following composite criteria: CDRS-R total score ?28, a Young Mania Rating Scale (YMRS) total score ?8, and a Clinical Global Severity, Bipolar (CGI-BP-S) depression score ?3. Result: In the short-term study, 347 patients were randomized to lurasidone or placebo (mean age, 14.3 years). At the primary Week 6 endpoint, treatment with lurasidone was associated with statistically significant and clinically meaningful improvement compared with placebo in the CDRS-R total score (-21.0 vs. -15.3; P<0.0001; effect size, 0.45). A total of 223 patients entered the extension study, and 155 (69.5%) completed 28 weeks of treatment. At the time of the interim analysis, data were available on 95 patients at 52 weeks. For the extension study population, the mean CDRS-R total scores at DB and OL baselines were 58.1 and 37.6, respectively; and the mean CGI-BP-S depression scores were 4.53 and 3.13, respectively. Mean change from OL baseline in the CDRS-R total scores at weeks 12, 28, 40, and 52 were -6.5, -10.0, -10.8, and -10.7, respectively; and mean change in the CGI-BP-S depression scores were -0.65, -1.11, -1.17, and -1.36, respectively. Responder rates at OL baseline, weeks 12, 28, 40, and 52 were 55.0%, 73.7%, 85.1%, 87.0%, and 92.6%, respectively. Remission rates at DB baseline, OL baseline, weeks 12, 28, 40, and 52 were 0.0%,26.6%, 45.7%, 57.8%, 64.1%, and 71.6%, respectively. Conclusion: In children and adolescents with bipolar depression, long-term treatment with lurasidone was associated with continued improvement in depressive symptoms.

No. 31

WITHDRAWN

No. 32

Development of the Child Personality and Mental Health Screening Questionnaire, Second Version in Korea

Poster Presenter: Jun-Won Hwang
Co-Authors: Jeana Hong, Eunji Kim

SUMMARY:

The purposes of the current study were to develop a new mental health screening questionnaire which can be used for parents and teachers with elementary school children in Korea. [1] We developed the Child Personality and Mental Health Screening Questionnaire, Second Version (CPSQ-II) in order to perform a nationwide mental health screening for various mental health problems in all students in their 1st and the 4th grade of elementary school, which has been mandatory In Korea since 2012. [2] The CPSQ-II was developed and was tested for reliability and validity using nationwide data from

2,662 elementary school students. The CPSQ-II consisted of 65 items with 2 major domains including the Personality Domain the Mental Health Problems Domain. While the sum of score of all 24 items in the Personality Domain was not calculated, only those of 34 items in the Mental Health problems Domain were calculated and planned to use in order to screen children with significant mental health problems. The correlation coefficient for the test-retest reliability was 0.83 and the Cronbach's alpha was 0.88, respectively. Using McDonald's Omega-hirarchical coefficient in psych package of R language for factor analysis [3], we suggested 6 personality factors including Self-efficacy, Openness, Sincerity, Interpersonal Understanding, Proactivity, and Sense of Community. In addition, 5 factors for the Mental Health Problems Domain in the CPSQ-II were proposed including External Factors, Inattention, Anxiety/Depression, Academic/Social Difficulties, and the Irritability/Oppositionality. We also developed a practical guideline and manuals which can be easily used by parents with elementary school children and their teachers to screen and manage mental health problems at school. The CPSQ-II can be a useful and reliable tool to screen for mental health problems in elementary school children in Korea.

No. 33

Gene Environment Interaction of SLC6A4 and Maternal Negative Affectivity Predicting Behavior Problems in Korean Preschoolers

Poster Presenter: Junghee Ha
Co-Author: Eunjoo Kim

SUMMARY:

Individuals with short variants of SLC6A4 are more vulnerable to internalizing and externalizing problems than those with long variants. These problems in preschoolers are associated with poor emotional regulation. This study assumes that maternal negative affectivity will increase the risk of child's internalizing and externalizing problem by reducing the chances of developing emotional regulation. We investigated whether maternal negative affectivity moderates the effect of genetic polymorphism of SLC6A4 on children's' behavior problems. Participants included 143 preschoolers and their mothers in South Korea. CBCL and EAS Adult Scale were used to measure child behavior and maternal affectivity respectively. DNA from saliva was genotyped for serotonin transporter polymorphism.Maternal negative affectivity showed main effects in externalizing (b=5.78, p<.001) and internalizing problems (b=6.09, p<.001). The interaction of SLCA4 polymorphism with maternal negative affectivity showed main effects on externalizing (b = -7.62, p <.01) and internalizing problem. (b = -9.77, p<.01) Children with two short alleles showed considerable changes in both externalizing and internalizing problems according to maternal negativity; however, children with one short allele or none show relatively few change in behavior problems due to maternal affectivity.In conclusion, the effect of SLC6A4 polymorphism on child behavior was moderated by maternal negative affectivity. In addition, the impacts of maternal negative affectivity vary on the child's genetic risk. High maternal negative affectivity triggered risk allele while low maternal negative affectivity allows risk allele shows less behavior problems. Children with two short variants of SLC6A4 genotype may benefit from intervention that modulates maternal negative affectivity.

No. 34

Selecting Between Two Dyadic Therapies for Child Behavioral Problems: Child Parent Psychotherapy and Parent Child Interaction Therapy

Poster Presenter: Frances Shin, M.D.
Co-Authors: Oliver M. Stroeh, M.D., Liora Hoffman, Ph.D.

SUMMARY:

Background: Child Parent Psychotherapy (CPP) and Parent Child Interaction Therapy (PCIT) are two evidence-based parent-child dyadic therapies aimed to improve the parent-child relationship and child behavioral problems. CPP is indicated for a child up to five years old; its duration is a year; and it utilizes attachment, trauma, and psychoanalytic theory. PCIT is indicated for a child up to seven years old; its duration is several months; and it utilizes attachment and social learning theory. CPP therapists interact directly with both parent and child, whereas PCIT therapists usually are behind a one-way mirror providing the parent live "bug-in-

the-ear" coaching. Objective: To review the research regarding CPP and PCIT and to use this information to identify if and when one treatment is indicated over the other. Methods: A literature review was done in PsycINFO and PubMed using keywords CPP or PCIT. Only randomized controlled trials (RCTs) published in English were reviewed. 11 CPP articles (1991-2016) and 15 PCIT articles (1995-2016) were selected. Results: CPP improved rates of secure attachment between parent and child, including when the child had a history of maltreatment by the mother and when the mother had a history of MDD. In traumatized children, CPP decreased behavioral problems, post-traumatic stress disorder (PTSD) symptoms, and the likelihood of meeting criteria for PTSD diagnosis. PCIT decreased child behavioral problems in oppositional children (those with and without a diagnosis of oppositional defiant disorder (ODD)), in maltreated children, and in children with intellectual disability. In children with a history of physical abuse by a parent, PCIT reduced the rate of recurrence of physical abuse. Discussion: The existing literature particularly supports the use of CPP when the target is improving parent-child relationships and the use of PCIT when the target is decreasing child behavioral problems. Among children with a history of trauma, only CPP has evidence showing a decrease in child behavioral problems and PTSD symptoms. Although both CPP and PCIT are evidence-based treatments for traumatized children, factors such as parent/child readiness to process the trauma or perceived stigma towards therapy may be reasons to choose PCIT over CPP (PCIT does not address trauma directly, and the PCIT therapist can be considered a "coach" who is in a different room). When looking at children at risk of physical abuse by a parent, PCIT may be the preferred treatment given the evidence that it can decrease reoccurrence of physical abuse. Lastly, if the dyad is at risk of "treatment fatigue," PCIT may be preferred over CPP given its shorter, time-defined treatment course. Conclusion: Although to date there is no RCT directly comparing CPP to PCIT, the extant literature suggests that the target of treatment and particular parent- and/or child-related clinical factors may help clinicians select one dyadic treatment over the other.

No. 35

Pediatric Survey of the Burden of Disease in Adolescents (12–17 Years) With Attention-Deficit/Hyperactivity Disorder

Poster Presenter: Alexandra Khachatryan
Co-Authors: Peter Jensen, Michael Andreini, Steven Blahut, Eitan Shimko, Robert Stolper, Brigitte Robertson

SUMMARY:
Background Adolescents diagnosed with attention-deficit/hyperactivity disorder (ADHD) face significant educational, family and social burden. The caregivers' perspective of burden associated with ADHD has been assessed previously. This cross-sectional survey evaluated the burden associated with ADHD on productivity and social functioning from the patient's perspective. Methods A 20-minute online survey was administered to adolescents (12–17 years) diagnosed with ADHD and currently receiving stimulant medication. Adolescents quantified their ADHD burden using a 5-point Likert scale ranging from 1 (least severe) to 5 (most severe). A response of 4 or 5 was classified as high burden. Respondents were stratified by their current treatment regimen: short-acting (SA) or long-acting (LA) monotherapy, or multiple therapies. Means, medians, frequencies, and ranges were calculated for each question in the survey for each subject. Adolescent data were combined across current medication type, and statistically analysed by Two-Sample T-Test (for continuous metrics) or Chi-square test (for categorical measures). Results 174 adolescents with ADHD (mean [SD] age: 14 [2] years) receiving medications (LA, n=69; SA, n=55; multiple therapies, n=50) completed the survey. High burden on daily activities was reported by 51% of adolescents, with greater burden during the school week (58%) than during weekends in the school year (25%). During any period of a typical school day, 34%–51% of adolescents reported high burden; 51% during the later part of the school day, and 48% during afterschool activities/afternoon homework. During a typical school week, 97% of adolescents felt that their medication wore off during the day; 44% during afterschool activities/afternoon homework, and 32% during the later part of the school day. High burden on relationships with teachers and siblings was reported by 43% and 40% of adolescents

respectively, and by more adolescents receiving multiple therapies (50% and 45%, respectively) than monotherapy (LA: 41% and 36%; SA: 40% and 41%). Overall, ADHD burden was highest in those receiving multiple therapies (64%), followed by LA (51%) and SA (38%) monotherapy. Conclusions Adolescents diagnosed with ADHD reported high symptom burden despite current treatment. Perhaps representative of symptom severity and/or treatment complexity, adolescents receiving multiple therapies reported the greatest burden, followed by those on LA and SA monotherapy. While symptom burden was reported throughout the day, the periods of highest burden coincided with the periods when some medications may be wearing off (later part of the school day and afterschool activities/afternoon homework). Additional research is needed to better understand what treatment strategies will best address the unmet needs of adolescents particularly during periods when symptoms may not be well-controlled and negatively impacting quality of life. Study funded by Shire Development LLC.

No. 36
WITHDRAWN

No. 37
The Impact of a Resident-Lead School-Based Psychoeducation Program on the Awareness of Mental Health and Mindfulness in Middle Schoolers
Poster Presenter: Jacqueline Penn, D.O.
Co-Authors: Meghaa S. Bhargava, M.D., Theresa Jacob, Ph.D., M.P.H.

SUMMARY:
Background: Currently mental illness is prevalent among school-aged children. Early intervention for mental illness using mindfulness techniques has been shown to vastly improve children's lives. Further, the bulk of referrals to the Emergency Room (ER) for psychiatric reasons are middle school students. Implementing awareness of mental health early on into their school curriculum would educate them about the issues involved and help prevent the problem from escalating that an ER visit is required. Objectives: 1. To provide middle schoolers awareness of mental health issues, preventive measures and coping skills by incorporating pyscho-education into their regular school curriculum, 2. To examine the effectiveness of this psycho-education curriculum, 3. To elucidate the long-term outcomes of this curriculum in terms of the number of ER visits and inpatient hospitalizations for this population. Method: The Psychiatry Residency program at Maimonides designed a 45-minute psycho-education class that discussed the definition of stress, how it can affect mind and body mentally and physiologically, and how one can break the cycle of feeling stressed using various techniques, for 7th graders in a nearby public school. Last year our residents taught the 6th grade students stress coping skills and ended the class by asking each student to write down a toolbox of things they can do and a list of people they can talk to when they are stressed. This year, we intend to follow those 6th graders into their 7th grade year and teach the second class of our three year course. We intend to follow them next year, into their 8th grade class as well. This year we will focus on stress coping skills, which includes mindfulness exercises. Mindfulness has a wide breadth of empirical data showing that practicing these skills can change areas of the brain, such as the hippocampus and amygdala, thereby increasing emotion regulation. This cohort of students has many challenges they are confronted with during a time of transition and through puberty and we hope to alleviate some of that stress. Data collection for this this IRB-approved prospective study included pre- and post- psycho-education class surveys of 325 subjects, ER referral numbers for psychiatric reasons and hospitalizations for this population. Our study design allows us to evaluate this course for the same cohort longitudinally. Results: This psycho-education curriculum continues to be overall well-received by the students and their teachers, showing significant knowledge gain about mental illness in general and how to cope with stress in particular. Data processing is in progress. Conclusion: We expect at the very minimum to help middle schoolers' cope with stress by increasing awareness of mental health and teaching mindfulness techniques. It is envisioned that over the long-term, middle school student-ER referrals for psychiatric reasons would show a significant downward trend.

No. 38

WITHDRAWN

No. 39

Steroid Responsive Encephalitis and Late Onset Psychosis: A Difficult Diagnosis

Poster Presenter: Danielle Chang, M.D.
Co-Author: Saba Syed, M.D.

SUMMARY:

Mrs. H, a 77 year-old female with no formal psychiatric history and past medical history of atrial fibrillation, goiter, and hyponatremia in October 2016 and March 2017, presented to the ER for evaluation of altered mental status. She had worsening anxiety for several weeks and new onset delusions leading her to avoid oral intake. Upon initial examination, the neurology team diagnosed the patient with catatonia most likely due to a primary psychiatric disorder. Initial examination by the psychiatry consult liaison team resulted in recommendation for further neurologic and autoimmune work-up. Review of MRI head imaging yielded abnormal findings. Treatment with steroids was initiated and patient was responsive. Autoimmune work-up showed results consistent with Hashimoto's or steroid responsive encephalitis. Hashimoto's encephalitis is most prevalent in females during the 5th to 6th decades of life. In this poster, we discuss a case of Hashimoto's encephalitis occurring in an elderly female who presents with neuropsychiatric symptoms, as well as diagnostic and treatment considerations in patients with late onset psychiatric symptoms.

No. 40

I Can Succeed—Elementary School Prevention Program Based on Interpersonal Psychotherapy: A Randomized Control Trial of a Teacher-Led Program

Poster Presenter: Daphne Kopelman-Rubin, Ph.D.
Co-Authors: Anat Brunstein Klomek, Ph.D., Laura Mufson, Ph.D.

SUMMARY:

There is a gap between the need for mental-health services for school age students and the accessibility of these services. An ecological way to try to narrow this gap is by training teachers to deliver prevention programs as part of their daily routine. Executive functioning (EF) and interpersonal skills are strong resilience factors for academic as well as emotional and social development. I Can Succeed for Elementary Schools (ICS-ES) is a 3 tier prevention and intervention program for first to sixth graders based on Interpersonal Psychotherapy for Adolescents (IPT-A). ICS-ES aims to promote academic, emotional and interpersonal functioning by improving interpersonal and emotional skills according to the child's developmental stage. ICS-ES consists of a once weekly class, led by teachers, as well as teachers integrating ICS skills through all other class curriculums. Modules include psychoeducation about the association between learning, mood and relationships; enhancing skills of emotion recognition and expression, effective interpersonal communication, self-awareness, organizational skills, and self-monitoring. Methods: 14 schools from one central city in Israel were randomly assigned to either ICS-ES or Treatment as Usual (TAU- Social-Emotional Learning once a week class, led by school counselors). Both were implemented over two school years. Participants included 419 4th grade students (204 girls and 215 boys, aged 9-10) nested in 6 schools and 19 classes (283 participated in ICS-ES and 136 in TAU). Students were assessed for socio-emotinal skills 4 times over two school years and academic performance was assessed using school grades in three subjects: Hebrew, English and Math which are assigned in the middle and end of the year. Results: To examine the differences between intervention and control group conditions we used hierarchical linear modeling. Analyses revealed significant improvement in interpersonal skills (empathy, assertiveness and physical bullying) and in emotional functioning (significant decrease in internalizing). In addition, while verbal bullying significantly increased over time among controls, it remained unchanged among the intervention group. There were no differences between the groups in cooperation, responsibility, hyperactivity and shaming. Regarding academic functioning, analyses indicated that the level of Hebrew achievements significantly increased only among ICS-ES students; The level of English significantly decreased over time among TAU, and remained unchanged among the intervention group; there were no differences between the groups in Math. Conclusion: ICS-ES appears to be a promising preventive intervention for youth. Since this

program is delivered by teachers, it has an ecological valid. Further study is needed in order to examine relative contribution of specific modules and the length of the intervention needed to accomplish these results.

No. 41

The Impact of Autism and Intellectual Disability on the Need for Restraint and Seclusion in Pre-Adolescent Psychiatric Inpatients

Poster Presenter: Elizabeth O'Donoghue, B.A.
Co-Authors: David Pogge, Philip Harvey

SUMMARY:

Background: Manual restraint and seclusion (R/S) are last-resort methods used in psychiatric hospitals to manage aggressive and disruptive behaviors. Prior research suggests that the need for R/S is higher in pre-adolescents than in adolescents, although these incidents tend to be very brief and may be qualitatively different from those involving adults or adolescents (Pogge, Pappalardo, Buccolo, & Harvey, 2011, 2013). In particular, it appears that this intervention may be required by children whose behavior is less responsive to the kinds of environmental controls provided by the therapeutic milieu of the hospital. Two groups of children who may require more of these brief physical interventions are those who are intellectually disabled (ID) or suffer from Autism Spectrum Disorder (ASD; Beck, Durrett, Stinson, Coleman, Stuve, & Menditto, 2008; Kraus & Sheitman, 2004). The purpose of this study is to investigate the role ID and ASD may play in the use of R/S with children in an inpatient setting. Methods: The records of 5-12 year olds (N=777; mean age=9.71) consecutively admitted to an acute inpatient hospital between July 2016 and June 2017 were reviewed by a multidisciplinary treatment team and assigned a consensus DSM-5 diagnosis ID and/or ASD on the basis of all available information. Each case was then examined for the number and total duration of R/S events during their episode of inpatient care. Results: In this sample 48 children were determined to meet DSM-5 criteria for ASD (6.2%), 295 met criteria for ID (38.0%), 73 met criteria for both ASD and ID (9.4%), and 361 did not meet criteria for either condition (46.5%). Of these, 410 experienced at least one R/S event (52.8%). One-way ANOVA of these four patient groups (ID, ASD, Both, Neither) indicated that they were significantly different ($p<.000$) on both number of R/S incidents and total duration of R/S. Planned comparisons ($p<.000$) revealed that ID and ID/ASD patients required significantly more of these interventions than ASD patients without ID or patients with neither condition. Multiple regression analysis indicated that the effect of ID on R/S remained significant even when age is controlled. Conclusion: Previous research has indicated that R/S events involving pre-adolescents occur much more frequently but they are of much shorter duration than those involving adolescents or adults. These data suggest that a major factor contributing to the need for this intervention is intellectual disability (ID). Since prior studies suggest that the admission of ID children to psychiatric settings is on the rise (Pogge, Stokes, Buccolo, Pappalardo, & Harvey, 2014), these data suggest the need for specialized programs to address the unique challenges of treating ID children in psychiatric settings, in the hope that this may reduce the need for this sort of intrusive physical intervention.

No. 42

Impact of Cannabis Use on Inpatient Outcomes of ADHD in Adolescents: Insights From a Nationwide Inpatient Sample Study

Poster Presenter: Rikinkumar Patel
Co-Authors: Priya Patel, Kaushal Shah, Mandeep Kaur, Zeeshan Mansuri, Ramkrishna D. Makani, M.D., M.P.H.

SUMMARY:

OBJECTIVE: To determine the impact of Cannabis use (CU) on inpatient outcomes of Attention Deficit Hyperactivity Disorder (ADHD) in adolescents. BACKGROUND: Previous studies have evaluated the impact of CU on health-related quality of life in ADHD patients. METHODS: We used the Nationwide Inpatient Sample (NIS) from the Healthcare Cost and Utilization Project (HCUP) from year's 2010-2014. We identified ADHD and CU as a primary and other diagnosis respectively using validated International Classification of Diseases, 9th Revision, and Clinical Modification (ICD-9-CM) codes. We used the binomial logistic regression to generate adjusted odds ratios (aOR). RESULTS: We analyzed a total of

11,232 ADHD adolescents hospital admissions from year's 2010-2014 of which 1.8% had CU. Mean age of patients was 14.1 years (SD=1.79). Prevalence of CU was highest in ADHD in 15-18 years (73%) and common in the White race (71%). Higher proportion of ADHD with CU were transferred to acute care hospital and skilled/other nursing facility compared to ADHD without CU (5.4% and 7.4% vs. 1.1% and 2.6% respectively, p-value<0.001). CU increases the risk of inpatient charges >$12,247 (median) by 0.6 times (aOR=1.835; p-value=0.002) and increases the risk of inpatient stay >5 days (median) by 0.7 times (aOR=2.099; p-value<0.001). Utilization of psychotropic medications was lower in ADHD with CU by 0.8 times (aOR=0.448; p-value=0.017). CONCLUSION: Increased risk of substance use is a long term implication of ADHD in adolescents. It has been determined that comorbid CU in patients with ADHD not only increases the risk of acute inpatient care but also prolongs the inpatient stay, thus increasing healthcare cost. Surprisingly, comorbid CU decreases the utilization of psychotropic medications in ADHD patients. Further exploration with randomized controlled studies would be required to support and highlight this growing issue.

No. 43

Impact of Deep Brain Stimulation on Inpatient Outcomes in Patients With Parkinson's Disease and Comorbid Major Depressive Disorder

Poster Presenter: Rikinkumar Patel
Co-Author: Amit Chopra, M.D.

SUMMARY:

Objective: To measure impact of Deep Brain Stimulation (DBS) on inpatient outcomes in patients with comorbid Parkinson's disease (PD) and Major Depressive Disorder (MDD). Background: MDD is common comorbidity in PD and it not only negatively affects symptom burden but also leads to poor inpatient outcomes. The impact of DBS on inpatient outcomes in these patients has not been studied earlier. Methods: We used Nationwide Inpatient Sample from year's 2010--2014. We identified PD and MDD as a primary and other diagnosis respectively, and DBS as primary procedure using validated International Classification of Diseases, 9th Revision, and Clinical Modification codes. We used binomial logistic regression to generate adjusted odds ratios (aOR). Results: We analyzed 1,037 PD with MDD inpatient admissions of which 6.8% (n=70) had DBS. The mean length of hospitalization (1.7 vs. 6.1 days; p<0.001) was significantly lower and the risk of inpatient stay of >4 days (median) was reduced by 1.58 times (aOR 0.205; 95%CI 0.108-0.389; p<0.001) in DBS patients. Treatment with DBS was associated with higher mean cost of hospitalization ($54,849 vs. $29,707; p<0.001) along with increased risk (1.47 times) of median inpatient charges of >$21,610 (aOR 4.338; 95%CI 2.168-8.682; p<0.001). DBS patients had decreased risk (1.65 times) of major loss of body function (aOR 0.192; 95%CI 0.075-0.491; p=0.001). DBS patients had significantly lower transfers to acute care hospital and Skilled Nursing Facility (0% and 7.1% vs. 4% and 56.6%; p<0.001). DBS was associated with a significantly lower inpatient mortality in patients with comorbid PD and MDD (0% vs. 2.1%; p<0.001). Conclusions: DBS in patients with comorbid PD and MDD significantly improves inpatient outcomes in terms of reduced length of hospitalization and transfer to acute care/nursing facility, and decreased morbidity/mortality. Patients with comorbid PD and MDD deserve greater consideration for DBS in multi-disciplinary team setting involving psychiatrists to optimize patient selection and safety.

No. 44

Psychiatric Treatment of a Child With Chromosome 15q Duplication Syndrome

Poster Presenter: Eduardo Rueda-Vasquez, M.D.

SUMMARY:

Chromosome 15q duplication syndrome (dup15q syndrome) is a clinically identifiable syndrome which results from duplications of chromosome 15q. When the duplicated material comes from the maternal chromosome, developmental problems are often the result. The chromosome duplication is not inherited, but occurred as a random event during the formation of reproductive cells (eggs and sperm) or during early embroyonic development. There is a wide range of severity in the developmental disabilities experienced by individuals with chromosome 15q duplication syndrome. Two individuals with the same dup15q chromosome pattern may be very different in terms of their

abilities. Reviews of the scientific literature do not show an obvious correlation between the size of the duplication region and the severity of the symptoms. (1) Hereditary genetic and metabolic disorders involve the nervous system at multiple levels, resulting in varied manifestations; common clinical presentations of such disorders in childhood include the following features in combination: • Developmental delay • Neurologic or developmental regression • Family history of similar symptoms in a sibling or closely related individual • Episodic alteration in level of consciousness or recurrent neurologic symptoms • Multisystem involvement (in addition to neurologic systems) • Development and progression of a particular neurologic sign such as ataxia or seizures (2) The following features were found in the 14 year old male patient seen: the parents reported in the history symptoms of fine motor delays, cognitive disabilities with difficulty learning, associated aggressive behavioral problems both at school and home, speech/language delays with poor expressive language, attention deficit disorder, hyperactivity and impulsivity, precocious puberty, touching girls, and school defiance and insubordination. Other reported medical problems included recurrent respiratory infections, middle ear effusions requiring tubes, eczema, overeating, and weight gain. He was 68 inches tall, weighed 200 pounds. He had a flat nasal bridge or "button" nose, epicanthic skin folds at the inner corners of deep set eyes. His ears were low-set. His appearance and his speech difficulties had triggered other classmates to bully him. He is fortunate that he has not experienced any seizure activity.

No. 45

Precision Psychiatry in a Rural Setting

Poster Presenter: Eduardo Rueda-Vasquez, M.D.

SUMMARY:

One aspect of what has been called "precision psychiatry" is the pharmacogenetics and pharmacogenomics of the genetics aspects for better psychopharmacological treatment of mental illness. The terms pharmacogenetics and pharmacogenomics are currently used interchangeably. The use of the term pharmacogenomics has become more frequently chosen to designate the process of using documented genetic variation to guide medication selection and dosing. Pharmacogenomics new tools have become available in the market as a psychotropic medication choice decision aid. Pharmacogenomic testing has taken place rapidly over the last decade. Initially, drug-metabolizing enzyme genes, such as the cytochrome P 4 5 0 2D6 gene (CYP2D6), were identified. One of them, the Genesight test was advertised as able to analyze the genes and help to select the medications that are more likely to work better for depression, anxiety, bipolar disorder, schizophrenia, acute and chronic pain, attention deficit hyperactivity disorder, narcolepsy and folic acid deficiency. That more than 8,000 healthcare providers have used Genesight to help determine the medications and treatments for over 75,000 patients. I will discuss a typical example which may occur in any psychiatric office. Based on this genotyping advertising, the parents of a patient utilized the test in order to identify the potential use of pharmacogenenomics in their child. The test was done as part of the optimal patient care pursued in a rural setting of a 7 year old male who had not responded to multiple treatments of a constellation of symptoms including, inattention, impulsivity, hyperactivity, aggressivity to self and others, irritable mood, brief psychotic episodes with auditory and visual hallucinations and pervasive developmental symptoms in areas of language and interpersonal relations.

No. 46

The Use of Poetry in the Therapy of Anger in an Adolescent Patient Population

Poster Presenter: Eduardo Rueda-Vasquez, M.D.

SUMMARY:

Adolescents with difficulties managing their anger can be disruptive both at home and school. This difficulty may ultimately impact their learning and their psychosocial development. Background: Anger in adolescents is a complex comorbid symptom, which sometimes requires a multidisciplinary approach involving educators, psychologists, physicians, parents, school and county mental health agencies and courts. Methods: Results: One hundred adolescents ages 13 to 19 were seen in a rural outpatient clinic for psychiatric treatment of multiple disorders such as Attention Deficit

Hyperactivity Disorder, Mood disorders, Oppositional disorder, and conduct disorder with comorbid symptoms of anger and aggression. Because of this comorbidity, the presence of anger in these disorders needed to be addressed in efforts to avoid harm to self and others. Psychopharmacological treatment was complemented with adjunctive relaxation techniques and reading of poetry for the control of anger. The reading of a poem was introduced as a way to evaluate the possible management of anger as a comorbid symptom with this relaxing technique. Relaxation techniques, including the reading of a poem, were added to the psychotherapeutic regimen. It was explained that reading a poem would be the equivalent of "switching the channel" in the brain from the anger. That it would help to practice reading, about once an hour, ten hours a day, for a total of about 10 minutes of reading a day, plus necessary times as needed to control feelings of anger. The poem "If" by Rudyard Kipling was chosen. This writer took the liberty to change the last words of the poem for females patients, to read: "you'll be a lady, girl!" from the original " you'll be a Man, my son!" to accommodate for the gender of the reader. Patients with specific reading disorder were excluded from the study. (4) Forty percent of the readers stated that reading the poem had helped them to cope with the anger. The anger which originally has been described as 10 in the scale of 1 to 10, was reduced to about 5 in 23 of the patients. Five of the patients admitted that they never read the poem and gave the reason of "hating reading." None of the readers, memorized the poem, which may account for the non-adherence to the reading regimen. Some answered that they have lost, misplaced the poem or simply forgotten it. Early indications suggests that a well-designed study to improve compliance could determine the benefit of reading in the efforts to control anger, and its outcome.

No. 47

Expanding the Scope of Practice for Psychiatrists Colocated in a Primary Care Clinic to Include Buprenorphine Treatment for Dual Diagnosis Patients

Poster Presenter: Jessica A. Koenig, M.D.

SUMMARY:

Background: Opioid addiction affects over 2 million people in the U.S. Buprenorphine can be used to effectively treat opioid use disorder. Although buprenorphine can be provided in outpatient settings, only 2.2% of physicians have waivers that allow them to prescribe buprenorphine and 25% of physicians with these waivers have never actually administered treatment. Individuals with opioid use disorder may have limited access to medication assisted treatment due to limited supply of qualified prescribers. Patients with co-occurring psychiatric disorders may have particular difficulties with successfully engaging, participating and completing addiction treatment. Developing models of care that enable psychiatrists to prescribe buprenorphine while also treating co-occurring psychiatric illnesses, could enhance access for a vulnerable patient population. Methods: The setting for this study is the Haight Ashbury Free Clinic (HAFC), an FQHC community-based primary care clinic in an urban setting that includes psychiatric, behavioral health and addiction medicine services. To assess the feasibility and acceptability of implementing buprenorphine by psychiatrists in this setting, we will use a Plan-Do-Study-Act framework. To appropriately plan our implementation phase, we will first gather baseline data by completing a retrospective chart review of patients seen by a psychiatrist at HAFC from October 2016-September 2017. Data gathered from this chart review will include basic demographic information, primary psychiatric diagnosis, co-occurrence of opioid use disorder, and any current methadone or buprenorphine treatment from other providers. Following this needs assessment, we will adapt the current workflow used by HAFC primary care colleagues to develop and implement a psychiatry-specific protocol targeting patients with dual diagnosis. Feasibility will be measured by documenting how many patients receive buprenorphine treatment with the new protocol. Results: Preliminary data analysis shows approximately 600 unique patients seen by psychiatrists during the one year baseline period. 15% (n=90) have an opioid use disorder and approximately 33% (n=30) of these are not in treatment with opioid agonist treatment. We will implement our new protocol with ample time to

gather subsequent process and feasibility data with final results for the APA conference in May of 2018. Conclusion: Expanding the scope of psychiatrists to provide buprenorphine treatment for patients with dual diagnosis can enhance whole person care for this vulnerable population. Results from our study can inform other community clinics, both primary care and specialty mental health, regarding the feasibility and acceptability of implementing buprenorphine treatment within a psychiatric panel.

No. 48

Assessment of Recovery-Oriented Outcomes Associated With Adherence to Long-Acting Injectable Antipsychotics in an Urban Safety-Net Population

Poster Presenter: Kei Yoshimatsu

SUMMARY:

Background: Previous research has shown that long-acting injectable antipsychotics (LAIs), when compared to their oral equivalents, increase medication adherence, decrease episodes of psychiatric decompensation, and reduce overall cost of care in patients with psychotic illnesses. Growing literature supports the effectiveness of LAIs in community-based settings and among patients with additional complexities such as co-morbid substance use diagnoses and homelessness. However, there is a knowledge gap about whether LAIs affect change in patients' recovery-oriented goals such as employment, housing, and interpersonal functioning. This study seeks to address this knowledge gap by assessing change in levels of psychosocial functioning among patients who have been adherent to LAIs in a safety-net urban community-based mental health system. Methods: This is a retrospective cohort study using longitudinal data extracted from county-wide electronic medical and pharmacy record systems. We define our cohort as all patients seen in the year 2015 who were adherent to LAI for greater than 12 months, with no treatment gaps lasting longer than 90 days. Our primary outcome measure is the Adults Strengths and Needs Assessment reports (ANSA), an evidenced-based, clinically-validated tool that measures psychosocial functioning in the domains of employment, relationship, and housing. We examine the changes in ANSA scores within-subject on PO vs LAI antipsychotic. We define the initial time-point as ANSA score obtained within 1 year prior to initiating LAI on PO antipsychotic for at least 4 weeks. The second time-point is ANSA score obtained after being adherent on LAI for at least 6 months within 1 year of transitioning from PO. We will also analyze the data using linear regression models controlling for demographics data, lengths of treatment, and other clinical characteristics. Results: 77 patients met inclusion criteria for this study with average age of 46, primary dx of schizophrenia (57%), most common LAI of paliperidone 1 month (52%). When compared to their ANSA on PO, ANSA on LAI showed significant improvements in interpersonal problems ($p=0.019$), social functioning ($p=0.045$), residential stability ($p=0.034$), criminal behaviors ($p=0.002$), medication adherence ($p=0.001$), community connection ($p=0.039$), spirituality ($p=0.016$). We are in the process of completing the regression analysis. Conclusions: We confirm our hypothesis that patients who have been adherent on LAIs, compared to when they were on POs, will show significant improvements in key domains of psychosocial functioning as evidenced by changes in ANSA scores. Our study will add to the knowledge gap of whether LAIs are effective in improving recovery-oriented goals and will better inform community-based mental health practices about the efficacy of LAIs.

No. 49

Learning From a New Model of Care: Interprofessional Collaboration in the Community Mental Health Centers (CMHC) in the Mental Health Reform in Peru

Poster Presenter: Jose A. Arriola Vigo, M.D.
Co-Authors: Jeffrey Stovall, Francisco Diez Canseco

SUMMARY:

Background and aims Worldwide, mental health disorders negatively impact individual's ability to function in society. Countries have implemented models of patient care to promote, prevent and treat patients with mental illness. In this context, a mental health reform was initiated in Peru with the implementation of the community mental health model. The reform aims to provide mental health care in the community through specialized facilities, the Community Mental Health Centers (CMHC). Although twenty eight are currently running, three

hundred CMHC have been proposed to be implemented by 2021. One of the most strongly emphasized aspects of this model is inter-professional collaboration which aims to facilitate coordination of patient care within the CMHC and with other institutions. Thus, this study aims to describe the professional collaboration aspect in the current model of care in the CMHC as well as to identify barriers to implementation and potential solutions. Materials and methods A qualitative research study using in-depth semi-structured interviews with clinicians from three CMHC and with leaders who have been involved in the implementation of the mental health reform was conducted in two regions of Peru. The interviews and interaction with participants were in Spanish, their native language. Interviews were digitally recorded with consent, transcribed and analyzed using principles of grounded theory applying a framework approach. Inter-professional collaboration was assessed using a three-dimensional approach including individual, group and organizational perceptions. Results Twenty-five people were interviewed including 21 clinicians and 4 leaders. Key themes related to inter-professional collaboration included the importance of management and leadership skills, balance of productivity and expectations, and work motivation and training in community psychiatry. Among the potential barriers, most themes included challenges in assessing productivity, differences in contract type and salary, and communication procedures with other organizations. Potential solutions focused on emphasizing quality of care rather than quantity, improving organizational culture and environment, and standardizing communication strategies with other institutions in the mental health network. Conclusions Promising advances in the mental healthcare system in Peru using a community mental health approach have been accomplished. As such, rapid evaluation of the delivery of care and barriers to implementation will lead to identifying potential solutions and is essential for the ultimate success of the mental health reform. Challenges and potential solutions in assessing productivity, implementation of communication procedures, and differences in contract benefits among healthcare professionals should be quickly addressed in order to improve the quality of care delivered as well as to motivate staff members to continue providing optimal patient care.

No. 50

Home Treatment in Rural Southern Germany: Findings From the First Three Years

Poster Presenter: Karel Joachim Frasch, M.D.
Co-Authors: Schiele Alexander, Franziska Widmann

SUMMARY:

Background: Despite its compelling evidence based clinical and cost-effectiveness compared to inpatient psychiatric treatment in acute mental illness episodes, home based psychiatric treatment (HT) by multiprofessional teams is still in its infancy in Germany, mostly due to political and reimbursement issues. From a recent literature research it is known that there are only about 20 areas in the whole of Germany where this kind of service is provided [1]. One of those services resides in Donauwoerth, a small town with 18000 inhabitants in Northswabian Bavaria, as part of a comprehensive district mental health care center delivering psychiatric care for a catchment area of about 130000 inhabitants in a rural administrative district. Aim of this poster is to deliver findings from this scarce type of treatment on the basis of our 3year experience. Methods: Descriptive data will be provided in order to outline our version of HT which has been developed by, amongst others, two of the authors (KF and FW) elsewhere and had proved to work in another rural Bavarian catchment area around Guenzburg before as can be seen in the to our best knowledge only controlled study concerning HT that has been carried out in Germany so far [2]. The Guenzburg model was therefore transferred (with catchment area adjusted lesser staff) to our present working site. Results: The Donauwoerth team treats up to 8 patients simultaneously by use of 2 cars and consists of 0,2 consultant psychiatrist, 0,2 resident psychiatrist, 1,5 psychiatric nurses and 0,2 social worker. 127 patients were treated over a 3year period: 66% were female, average age was 45 and 25% were living alone. 42% had a current job, most frequent main diagnoses were schizophrenia (41%) and major depressive episode (31%). Treatment duration was on average 54 days (range 1-209) with 21 face-to-face contacts per treatment episode (range 1-85; nurses 18, physician 8, social worker 3; 57% of the

visitations were provided by 2 therapists). Per week, the physician(s) spent 7 hours in patients' homes (nurses 25, social worker 2). 36% of the therapist time was spent "on the road". Conclusion and Outlook: As we showed before in Guenzburg, HT also works in a smaller catchment area with accordingly less staff, in a collective with a high proportion of patients living on their own. As expected, treatment durations exceeded those of inpatient treatment which may be due to the marked lower therapeutic contact density. A new legal framework with regard to reimbursement promises a pronounced increase of HT sites in Germany which by now is nationwide considered to be necessary to provide up to date psychiatric care for the severely mentally ill.

No. 51

Psychiatric Characteristics and Management of Patients With Deliberate Foreign Body Ingestion in a Public Hospital Setting

Poster Presenter: Gretchen B. Alexander, M.D.

SUMMARY:

Deliberate foreign body ingestion is a problem commonly encountered by emergency physicians, gastroenterologists, surgeons and psychiatrists. Patients with repetitive ingestion behaviors tend to be costly to treat due to the need for multiple radiographic studies, endoscopic and surgical procedures and additional consultative and nursing services. Typically, this behavior is not responsive to usual treatment making management and disposition challenging. The purpose of this study was to characterize psychiatric and other characteristics of patients with deliberate foreign body ingestion in order to identify potentially effective treatment approaches. Methods A search of the hospital's electronic health record was carried out for dates between January, 2010 and January, 2014. Search terms included all ICD-9 codes referring to foreign body ingestion as well as all CPT codes referring to endoscopic retrieval of foreign bodies. Charts were screened to exclude cases of pediatric ingestion, accidental ingestion and non-ingestion foreign bodies. Forty-three cases of deliberate foreign body ingestion were identified. Charts for those patients were reviewed for all hospital encounters in order to collect data related to co-morbid neurological diagnoses, psychiatric diagnoses and medications, stated reasons for ingestion and co-morbid foreign body insertion. Results Patients were predominately male (72%) with an average age of 33. 35% of patients were inmates, and 47% of patients had a history of aggressive or assaultive behavior. Only 7% of patients had no psychiatric diagnosis, with most patients having multiple diagnoses. Diagnoses distributed as follows: schizophrenia, schizoaffective and other psychotic disorders: 44%; bipolar and mood disorders: 33%; depression and other depressive disorders: 9%; borderline personality disorder: 40%; post-traumatic stress disorder: 16%; substance use disorders: 26%. Only 32.5% of patients were felt to have objective evidence of psychosis. Negative affective state was reported in 40% of cases to be the reason for ingestion. 37% of patients had seizure disorder and 40% of patients had intellectual disability. 25.5% of patients had co-morbid foreign body insertion. Psychiatric management of subjects was characterized by polypharmacy with 70% of patients being prescribed two or more medications, and 33% prescribed three or more medications. Conclusion High prevalence of borderline personality disorder, aggression, and seizure disorder in patients with deliberate foreign body ingestion suggest that more consideration should be given to evaluating and treating these patients for impulse control disorders and repetitive self-harm behaviors than appears to be current practice. Highly motivated patients with intact cognition may benefit from cognitive behavioral approaches. Pharmacotherapy could include SSRI-type antidepressants, anticonvulsants including phenytoin and carbamazepine, as well as naltrexone.

No. 52

Incidence of Peptic Ulcer in Patients With Anxiety Disorders: A Population-Based Study

Poster Presenter: I-Chia Chien

SUMMARY:

Objective: We designed this study to examine the incidence of peptic ulcer and risk factors in patients with anxiety disorders. Methods: The National Health Research Institute provided a database of 1,000,000 random subjects for study. We obtained a random sample of 766,427 subjects aged ?18 years in 2005. Those study subjects who had at least two

service claims during this year for either ambulatory or inpatient care, with a diagnosis of anxiety disorders were identified. Those study subjects with primary or secondary diagnosis of peptic ulcer (ICD-9-CM: 531, 532, or 533) in 2005 were identified. The differences in the incidence of peptic ulcer between patients with anxiety disorders and the general population in 2005 were tested by multiple logistic regression adjusted for the other covariates, including age, sex, insurance amount, region, and urbanicity. Results: The incidence of peptic ulcer in patients with anxiety disorders was higher than that in the general population (5.89% vs. 2.82%, odds ratio, 1.68; 95% confidence interval, 1.62–1.75) in 2005. Compared with the general population, patients with anxiety disorders had a higher incidence of peptic ulcer in all age and gender groups. Conclusions: Patients with anxiety disorders had a higher incidence of peptic ulcer than that in the general population. Age, antipsychotic use, and hyperlipidemia were risk factors for peptic ulcer in patients with anxiety disorders.

No. 53

Estimating Lost Reimbursement Incurred by the Delayed Transfer of Psychiatric Patients

Poster Presenter: Kimberly Deborah Lauren Parks, M.D.

Co-Authors: Stephanie C. Tung, M.D., Patricia Isbell Ordorica, M.D., Jamie Lim Lacsina, D.O., Daniel Holschneider

SUMMARY:

Background: Deinstitutionalization of mental health care in the 1970's has resulted in fewer inpatient psychiatric beds and increased numbers of psychiatric patients admitted to medical/surgical units awaiting placement at inpatient psychiatric and long-term care facilities (1). These delays have significant financial consequences to hospitals. Methods: The aims of this study were to (A) identify factors that delay placement of adult psychiatric patients admitted to medical/surgical wards at Los Angeles County/University of Southern California (LAC+USC) Medical Center, a 600 bed public hospital without inpatient psychiatric beds, and (B) estimate lost revenue from these delays. Psychiatric consultation-liaison records from 9/2015 to 4/2017 were utilized to calculate the number of days that patients meeting criteria for inpatient psychiatric hospitalization waited for placement following medical clearance. A retrospective chart review of 155 patients was conducted looking at the following factors: Age < 50 years, lack of health insurance / MediCal, conservatorship, non-ambulatory status, chronic medical conditions, cognitive disorder. Descriptive analyses were performed for categorical variables. Mean, standard deviation, median and interquartile range were reported for continuous variables. Poisson regression and negative binomial regression test was used for bivariate analysis. Significance level of 0.05 for two-sided tests was used. $2,000/day/patient was used as the lost cost of keeping a medically cleared patient at LAC+USC; this was the average reimbursement rate for a medical/surgical bed across all insurance types. We adjusted for likelihood of filling an empty bed and assumed reimbursement of $0 once 'medically cleared.' Results: The most significant factors for delay were age > 50 years, non-ambulatory status, and discharge facility type. Medically cleared patients stayed for a total of 3,633 days. The average lost reimbursement was $373,000 +/- $124,000 per month. Five patients accounted for one third of the total days and lost revenue. These patients were older, conserved, MediCal patients, with psychosis, and had > 3 risk factors or special circumstances. The number of patients on the transfer list was underestimated due to omissions from patient logs and delays in documentation of medical clearance. Conclusions: Delays in the transfer of medically cleared psychiatric patients incurs a significant cost as the reimbursements to a general hospital often stop or become minimal once the patient has been deemed 'medically cleared.' Risk factors for delay include age, non-ambulatory status and a need for additional psychiatric care. A significant portion of lost reimbursement is from a minority of patients, showing a need for targeted placement assistance.

No. 54

Childhood Trauma and Resilience in Psoriatic Patients

Poster Presenter: Luigi Janiri, M.D.

Co-Authors: Maria Luigia Crosta, Salvatore Di Pietro, Mariateresa Acanfora, Lorenzo Moccia, Isabella Panaccione, Lucio Rinaldi, Marco Di Nicola

SUMMARY:
Aims. Psoriasis is a chronic inflammatory skin disease with a complex etiology, involving the immune system, genetic factors, and external/internal triggers, with psychosomatic aspects. Among dermatologic conditions, psoriasis has the highest association with psychiatric illness that are often undetected and untreated. Trauma may affect etiopathogenesis and biological progression of psoriasis possibly via alterations in HPA axis and immune system functioning, and via abnormalities in catecholamines and neuropeptides release. The aim of the study was to investigate childhood trauma and resilience in a psoriatic sample compared with healthy controls. Correlations between resilience, childhood trauma, clinical data and psoriatic features were also evaluated. Methods. Fifty psoriatic patients and fifty homogeneous healthy controls were enrolled at the dermatological clinic of the Fondazione Policlinico Universitario "A. Gemelli" in Rome. We used the Psoriasis Area and Severity Index (PASI) to assess the severity of psoriasis and the Skindex-29 to measure health-related quality of life. The psychometric battery included the Connor-Davidson Resilience Scale (CD-Risc) and the Childhood Trauma Questionnaire (CTQ) to assess resilience and trauma exposure, respectively. Results. Psoriatic patients and healthy controls were homogeneous in terms of gender (males: 21 vs. 25 subjects), age (47±13.2 vs. 41.1±16.5 years), education (13.9±3.7 vs. 14.8±3.1 years) and occupation (yes: 70% vs. 80%). In the clinical sample, PASI score was 6.5±4.4, while age of onset and duration of illness were 35±16.3 and 14-12.2 years. In psoriatic subjects, the CD-Risc scores were lower than in healthy controls and this difference was significant ($p<0.05$) for the total score and the sub-scales Trust in one's instinct, Tolerance of negative affect, Strengthening effects, and Positive acceptance of change and secure relationship. Psoriatic patients showed a significant prevalence of traumatic experiences ($p<0.05$ for Sexual abuse and Emotional neglect) compared to healthy controls. Correlations between quality of life and psoriasis severity were also observed. Conclusions. Improving resilience with a multidisciplinary approach and an early psychological intervention could facilitate the management of psoriasis, by promoting the establishment of a stronger therapeutic alliance and a better acceptance of disease. Programmes for psoriatic patients should focus on self-motivation and strengthening of self-efficacy. Concurrently, an important part of psychological support should foster affect regulation by focusing on the link with psychosomatic symptoms.

No. 55

Impact of Personality Disorder Cluster on Depression Outcomes Within the Collaborative Care Management (CCM) Model of Care

Poster Presenter: Merit Philip George
Co-Author: Kurt Angstman

SUMMARY:
Background: Previous studies have suggested that having a comorbid personality disorder (PD) diagnosis along with depression is associated with poorer depression outcomes relative to those without comorbid PD. However, few studies have examined the influence of specific PD cluster types, as classified by the DSM-V. The purpose of the current study is to compare depression outcomes among Cluster A, Cluster B, and Cluster C PD patients treated within a collaborative care management (CCM) primary care setting, relative to CCM patients without a PD diagnosis. The overarching goal was to identify cluster types that might confer a worse prognosis. Methods: This retrospective chart review study examined 2826 adult patients with depression enrolled in CCM. The cohort was divided into 4 groups based on the presence of a comorbid PD diagnosis (Cluster A/non-specified, Cluster B, Cluster C, or no PD). Baseline clinical and demographic variables, along with 6-month follow-up PHQ-9 scores were obtained for all groups. Depression remission was defined as a PHQ-9 score <5 at 6 months, and persistent depressive symptoms (PDS) were defined as a PHQ-9 score ?10 at 6 months. Adjusted odds ratios (AORs) were determined for both remission and PDS using logistic regression modeling for the 6-month PHQ-9 outcome, while retaining all study variables. Results: 59 patients (2.1%) had a Cluster A or non-specified PD diagnosis, 122 patients (4.3%) had a Cluster B diagnosis, 35 patients (1.2%) had a Cluster C diagnosis, and 2610 patients (92.4%) did not have any PD diagnosis. The presence of a Cluster A/non-specified PD diagnosis was associated with a 62% lower likelihood of

remission at 6 months (AOR= 0.38; 95% CI 0.20-0.70). The presence of a Cluster B PD diagnosis was associated with a 71% lower likelihood of remission at 6 months (AOR= 0.29; 95% CI 0.18-0.47). Conversely, having a Cluster C diagnosis was not associated with a significantly lower likelihood of remission at 6 months (AOR= 0.83; 95% CI 0.42-1.65). Increased odds of having PDS at 6-month follow-up were seen with Cluster A/non-specified PD patients (AOR: 3.35; 95% CI 1.92-5.84) as well as Cluster B patients (AOR: 3.66; 95% CI 2.45-5.47). However, Cluster C patents did not have significantly increased odds of experiencing persistent depressive symptoms at 6-month follow-up (AOR: 0.95; 95% CI 0.45-2.00). Conclusions: Out of the three clusters, the presence of a Cluster B PD diagnosis was most significantly associated with poorer depression outcomes at 6-month follow-up, including reduced remission and increased PDS. Our Cluster A/non-specified PD group also showed poor outcomes, however the heterogeneity of this subgroup with regards to PD features must be noted. The development of novel targeted interventions for at-risk clusters may be warranted in order to improve outcomes of these patients within the CCM model of care.

No. 56

Impact on Clinical Evolution and Quality of Life of Comorbid Diabetes/Depression: Do We Need to Improve Detection in Primary Care?

Poster Presenter: Gerhard Heinze
Co-Authors: Diana Guizar, Napoleon Bernard

SUMMARY:

INTRODUCTION Diabetes mellitus (DM) prevalence is increasing worldwide, World Health Organization predicts there will be 642 million by 2040 and reveal that 49% of the depressed people with DM2 were nonrecognized by primary care system (1). Major Depressive Disorder (MDD) and diabetes have been recognized as major public health issues in Mexico, however, no studies to date examined the impact on clinical evolution and quality of life (2). OBJECTIVE To assess the prevalence of undiagnosed MDD in patients with DM2 and to compare clinical evolution and quality of life in patients with and without current MDD. METHODS Comparative longitudinal study coordinated by Faculty of Medicine, UNAM and INTERPRET-DD (3). 168 DM2 patients (mean age 53.3±8.21 years) were evaluated by using the MINI (Mini International Neuropsychiatric Interview), Problem Areas in Diabetes Questionnaire (PAID), Well-Being Index(WHO-5) and Patient Health Questionnaire(PHQ-9) and a brief medical history about socio-demographic data, lifestyle factors and clinical characteristics. RESULTS Of the total sample, 41 patients (24.4%) had depression (30 women and 11 men, mean age 52.0±7.1 years). WHO-5 showed a lower mean for patients with vs without depression (14.2±6.6 vs 23.3±2.4, p<0.001). PAID showed a greater uncomfortableness in depressed patients (15.8±12.6 vs 5.4±7.8, p <0.001) and PHQ-9 showed a greater symptomatology in depressed patients (10±5.5 vs 1.9±3). Patients with MDD presented more complications (1.43±1.16 vs 0.98±1, p=0.01): neuropathy (61% vs 37%) and retinopathy (43.9% vs 17%). CONCLUSIONS Patients with comorbid DM2-Depression showed a greater number of complications (neuropathy/retinopathy), which represent an impact on quality of life. These findings support a recommendation for routine screening and management of comorbidity, especially for those in primary care, in order to reduce the number of nonrecognized depressed diabetic patients, improve treatment adherence, decrease the number of complications and improve quality of life.

No. 57

The Buffering Effect of Heart Rate Variability on the Relationship Between Parietal Alpha Asymmetry and Depression

Poster Presenter: Seung Yeon Baik
Co-Authors: Cholong Kim, Hyeonjin Jeon, SangWoo Han, Seung-Hwan Lee

SUMMARY:

Background Electroencephalographic(EEG) research has suggested relatively reduced brain activity in the left frontal and right posterior region as a trait-marker of depression. However, inconsistent results have been reported, suggesting the need to identify moderating and mediating factors. This study investigates the role of heart rate variability (HRV), a beat-to-beat changes in heart rate that is reported to be related to depression-related symptoms, as a moderator in the relationship between frontal and parietal alpha asymmetry and depression. Methods

Resting EEG (eyes open) was recorded from 38 adults with Major Depressive Disorder (MDD). Three HRV components (LF, HF, LF/HF ratio) were calculated in the frequency domain. Total (8-12Hz), high (10-12Hz), and low (8-10Hz) alpha frequency bands were used. Beck's Depression Index-II (BDI-II) and Beck's Anxiety Index (BAI) were measured. Result Relatively greater right parietal alpha activity significantly predicted BDI total score only when HF is low (high LF/HF ratio) at low frequency band. In addition, the interaction effect of parietal alpha asymmetry and HRV variables became more significant after including BAI total score as a covariate. No moderation effect of HRV was found for frontal sites and other frequency bands. Discussion Our results indicate that HRV moderates the relationship between parietal alpha asymmetry (low frequency band) and depression. We suggest that increased HRV may, in part, serve as a buffer against depression by enhancing emotion regulatory capacity.

No. 58

SAGE-217 in Major Depressive Disorder: Results for a First-in-Class $GABA_A$ Receptor Allosteric Modulator From a Phase 2 Placebo-Controlled Trial

Poster Presenter: Handan Gunduz-Bruce
Co-Authors: Christopher Silber, Anthony Joseph Rothschild, M.D., Robert Alan Riesenberg, M.D., Abdul Sankoh, Haihong Li, Ella Li, Charles Zorumski, David Russell Rubinow, M.D., Steven Marc Paul, M.D., Jeffrey Jonas, James Doherty, Stephen Kanes

SUMMARY:
Background: Major depressive disorder (MDD) is a disabling and potentially life-threatening condition. GABAergic signaling has been linked to the etiology of MDD and presents an opportunity for medication development with a novel mechanism of action. SAGE-217 is an orally active, positive allosteric modulator (PAM) of synaptic and extrasynaptic $GABA_A$ receptors that was well-tolerated and showed anti-depressive effects in an open label study in subjects with MDD. This is the first double-blind, randomized, placebo-controlled study evaluating the efficacy and safety of SAGE-217 in subjects with MDD. Methods: This multicenter, US study included 89 subjects of both sexes, ages 18-65, with a diagnosis of MDD and a Hamilton Rating Scale for Depression (HAM-D) total score ≥22. Subjects were randomized 1:1 to receive a nightly dose of SAGE-217 Capsule (30 mg) or placebo on Days 1-14, followed by 4 weeks off treatment. The primary endpoint was the reduction in depressive symptoms, compared to placebo, as assessed by the change in the 17-item HAM-D total score from baseline to Day 15. Montgomery-Åsberg Depression Rating Scale (MADRS) and HAM-D scores were assessed through Day 42. Safety and tolerability were assessed by standard safety parameters including adverse events (AEs), the Columbia-Suicide Severity Rating Scale, clinical laboratory measures, vital signs, and ECGs. Results: The SAGE-217 group showed a greater mean reduction from baseline in HAM-D total score compared to the placebo group at Day 15 (17.6 for SAGE-217 versus 10.7 for placebo; $p<0.0001$). Significant separation from placebo was observed in HAM-D score as early as Day 2 ($p=0.0223$). The MADRS total score also demonstrated similar greater mean reduction from baseline in the SAGE-217 group vs placebo group at Day 15 ($p=0.0021$). The statistically significant reductions in HAM-D and MADRS scores versus placebo were maintained through Day 28. There were no deaths, serious or severe AEs. There were two discontinuations in the SAGE-217 group due to AEs. The most common AEs (at least 5%) in the SAGE-217 group were headache, nausea, dizziness, and somnolence. Conclusions: This randomized, placebo-controlled trial is the first placebo-controlled study to evaluate the efficacy and safety of the oral neuroactive steroid SAGE-217, a $GABA_A$; receptor PAM, in female and male subjects with moderate to severe MDD. Administration of SAGE-217 for 14 days resulted in robust, rapid, and sustained (over study period) reductions in depressive symptoms and was generally well tolerated. These results provide strong evidence that positive allosteric modulation of $GABA_A$ receptors is a viable path for investigation in developing treatments for MDD and support further development of SAGE-217 for this indication.

No. 59

Seasonal Affective Disorder: Eye Disorder, Retinal Function, Circadian Rhythm, and Light Therapy

Poster Presenter: Helle Madsen
Co-Authors: Shakoor Ba-Ali, Ida Hageman

SUMMARY:
Background: Light is considered a cornerstone in the pathogenesis and treatment of seasonal affective disorder (SAD). Major depression, both seasonal and nonseasonal type, is prevalent in persons with eye disorder and visual impairment. Dysfunction of the intrinsically photosensitive retinal ganglion cells (ipRGCs) may form part of the neurobiological association between these two conditions. In glaucoma ipRGCs degenerate as the disease progresses. The effect of light therapy in persons with visual impairment is unknown and may be associated to ipRGC function. Aims: to investigate associations between SAD, ipRGC function and circadian rhythm in persons with eye disorder and visual impairment and to investigate the effect of light therapy for SAD in visual impairment. In 3 studies, glaucoma is used as a model to investigate ipRGC dysfunction and its effect on SAD parameters. Hypotheses: 1. In glaucoma increased damage to the ipRGC leads to increased mood seasonality. 2. Individuals with severe glaucoma have lower diurnal melatonin levels summer and winter compared to healthy controls. Light therapy is an effective treatment in selected individuals with SAD and severe visual impairment. Methods: Glaucoma patients are assessed for mood seasonality with the Seasonal Pattern Assessment Questionnaire (SPAQ). Correlations between seasonality and glaucoma severity (visual field, retinal ganglion cell layer thickness) are investigated. A group of 28 glaucoma outpatients from the ophthalmology department at Rigshospitalet/Glostrup Hospital will be included and compared to a healthy control group. Participants are assessed for depressive symptoms, ipRGC function (pupillometric assessment of the post-illumination pupil response to blue light stimulus (PIPR)) and circadian rhythm (diurnal saliva secretion of cortisol and melatonin and sleep-log) in winter (November – February) and summer (May -August). In winter SAD individuals with severe visual impairment or blindness are included in a 6 week light therapy trial if their eye condition permits. Outcome measures: mood seasonality according to the SPAQ, seasonal regulation of the PIPR and diurnal melatonin, and reduction in depression scores following light therapy (6 weeks) Results: We will present preliminary results from the winter assessment.

No. 60

Evaluating YouTube as a Source for Recognizing Depression: A Cross-Sectional Study

Poster Presenter: Hitekshya Nepal, M.D.

SUMMARY:
BACKGROUND: Depression is the most common psychiatric illness and the leading cause of disability for ages 15-44 in the USA. About 15 million American adults were affected by a major depressive episode in 2014. The benefit of educating patients in the management of mental illness to enhance patient engagement and improve health outcomes has been well recognized. Explaining the diagnosis of depression in public settings has been challenging, especially in the era of social networking. The internet in general might be a good source for health education of depression and could potentially be utilized as a valid self-diagnostic tool. YouTubeTM is one of the most important sources of social media information to the public. We sought to study the adequacy of YouTubeTM videos as a tool to relay a descriptive definition of the diagnosis of depression. METHODS: YouTube was searched on February 25, 2017, using the following search words: “Depression,” “Sadness”, and “Antidepressant”. Only videos found in the first 10 pages of each search were included. Non-English, non-educational, and non-relevant videos were excluded. The authors created a novel 9-point scoring tool based on the definition of depression from both the DSM 5 criteria and PHQ-9 screening. Four independent reviewers evaluated, scored, and classified the videos into high, intermediate, and low quality based on the average score. An Intraclass Correlation Coefficient (ICC) was used to assess reviewers’ performance. RESULTS: A total of 132 videos out of 9,270,000 were identified as relevant and included in the analysis. Videos were categorized by the source of uploader into: health advertisements (n=38, 28.8%), personal (n=31, 23.5%), non-academic institution (n=27, 20.4%), news reports (n=21, 15.9%) and academic institutions (n=15, 11.4%). The mean score for all videos was 1.17 (SD 2.1). Only 16 out of 132 videos (12%) were classified as high quality, as the average scores were higher than 4 out of 9 based on our scoring tool. The ICC score was 0.982. CONCLUSIONS: Most videos found in the

search of a depression definition are inadequate. Leading medical organizations and academic institutions should consider producing and uploading quality videos to YouTubeTM to help patients and their families provide health education on depression.

No. 61

Anti-Inflammatory Treatment and Risk of Depression After First-Time Stroke in a Cohort of 174,487 Danish Patients

Poster Presenter: Ida Kim Wium-Andersen
Co-Authors: Marie Wium-Andersen, Martin Balslev Jørgensen, Merete Osler

SUMMARY:
Background: Depression is a common complication after stroke and inflammation may be a pathophysiological mechanism. This study examines whether anti-inflammatory treatment with acetylsalicylic acid (ASA), non-steroid anti-inflammatory drugs (NSAID) or statins influence the risk of depression after stroke. Method: A register-based cohort including all 147,487 patients hospitalized with first-time stroke January 1st 2001 through December 31st 2011 and a non-stroke population (n=160,235) was followed for depression until December 31st, 2014. Depression was defined as having a hospital contact with depression or redeemed prescriptions of antidepressant medication. The associations between redeemed prescriptions of ASA, NSAID or statins with early (up to one year after stroke or study entry) and late (more than one year after stroke or study entry) onset depression were analyzed using Cox proportional hazard regression. Results: Redeemed prescriptions of ASA, NSAID, or statin at the end of the first month after stroke, decreased the risk of early onset depression especially in patients with more severe stroke. Combined treatment with all three types of treatment decreased the risk further. Surprisingly, however, ASA or NSAID prescribed at the end of the first year after stroke or study entry increased the risk of late onset depression in stroke patients and in the non-stroke population while statin use seemed to decrease the risk of late onset depression. Conclusion: Our study provides evidence that anti-inflammatory treatment after stroke is associated with a lower risk of early onset depression, possibly by inhibiting the release of inflammatory cytokines. On the other hand, we found that ASA and NSAID increased the risk late onset depression, which could be explained by confounding by indication or mechanistically by their effect on the COX and augmentation of nitro- and oxidative stress. The study suggests that depression within the first year after stroke is driven by an increased brain inflammation following stroke and stresses the importance of anti-inflammatory treatment with ASA and statins immediately after stroke since this may not only prevent a new stroke event but also early onset depression. The study also stresses the need for more studies on the potential negative effects of anti-inflammatory drugs on risk of depression. The study was supported by the Danish Tryg Foundation and the Danish Heart Association.

No. 62

The Association Between Percent Body Fat and Body Mass Index and Depression in the Korean General Population

Poster Presenter: Jae-Hon Lee, M.D., Ph.D.
Co-Authors: Sung Keun Park, Ju Young Jung

SUMMARY:
Background: Depression and obesity are major public health concerns with significant social and physical burdens. Current literature presents conflicting data regarding the specific relationship between obesity and depression. Body Mass Index (BMI), a measure of obesity, is associated with depression in a U-shaped manner. However, BMI is limited in distinguishing between individuals who are obese from individuals with elevated muscle mass, and body fat may be a more appropriate measure of obesity. However, the relationship between body fat and depression remains unclear. Therefore, we conducted a large-scale cross-sectional study to assess the link between body fat and depression. Data was retroactively obtained from a total of 175,970 Korean participants between the ages of 18 and 91 who had received regular check-ups at Kangbuk Samsung Hospital between January and December 2014. Method: Depression was measured via the Korean versions of the Center for Epidemiologic Studies Depression Scale (CES-D). Body fat mass was obtained by multi-frequency

bioimpedance analyzer (BIA), and Percent Body Fat (PBF) was calculated. Study participants were divided into five groups by PBF quintile. Multiple logistic regression analysis was used to determine the odds ratios, with 95% confidence intervals, for the presence of depression with respect to PBF. Models were unadjusted and adjusted for demographic and clinical variables. Results: Adjusted models (i.e., age, sex, family income per month, relationship status, and employment status, average alcohol use (grams per day), smoking status, and degree of physical activity, BMI, as well as the presence of hypertension and diabetes) revealed a U-shaped association only amongst females. Specifically, females in the second PBF quintile had a significantly lower likelihood of experiencing depressive symptoms (Model 2 OR = 0.90 [95% CI 0.83 – 0.99]). Conclusions: Our results do not comport with the prevalent "jolly fat" hypothesis, where increased body fat may be protective against depression, as females in the second PBF quintile are consistent with normal body fat and weight among Asian women. Our results indicate that normal body fat is associated with a lower likelihood of depressive symptoms in Korean women.

No. 63

Maternal and Paternal Depressive Symptom Trajectories and Child's Socio-Emotional Problems

Poster Presenter: Johanna Tuulia Pietikäinen, M.D.
Co-Authors: Olli Kiviruusu, Ph.D., Anneli Kylliainen, Ph.D., Pirjo Pölkki, Ph.D., Outi Saarenpaa-Heikkilä, M.D., Ph.D., Tiina Paunio, M.D., Ph.D., Juulia E. Paavonen, M.D., Ph.D.

SUMMARY:

Background: Parental depression associates with children's socio-emotional problems (SEP) (1). We constructed maternal and paternal depressive symptom trajectories and studied their associations with child's externalizing and internalizing problems. Furthermore, we studied whether prenatal depression of parents was an independent risk factor for SEP of their children. **Methods:** We conducted a prospective study based on the CHILD-SLEEP birth cohort to evaluate mothers' and fathers' depressive symptoms (at 32nd gwk and 3mo, 8mo and 24mo postnatally) and child's SEP 24mo postnatally. Depressive symptoms were measured using a 10-item version of the Center for Epidemiological Studies Depression Scale (CES-D) (2, 3) and child's (N=935) SEP with Brief Infant Toddler Social Emotional Assessment (BITSEA) (4). Latent profile analysis was used to group parents according to their longitudinal patterns of depressive symptoms. Mothers were grouped to "stable low" (mean CES-D score constantly<4; N=599), "stable intermediate" (CES-D 6.3–7.9; N=249) and "stable high" (CES-D>11; N=72) latent profile groups. Furthermore, we identified a group (A) (N=18) of mothers who had depressive symptoms prenatally (CES-D≥10) but decreased symptoms (CES-D<9) at 8 and 24mo and another group (B) (N=17) who were not depressive prenatally (CES-D<8), but had increased symptoms (CES-D≥10) 8mo and 24mo. Groups were compared using logistic regression in terms of children's elevated total (≥14), externalizing (≥5) and internalizing problem (≥5.5) scores as the dependent variable. **Results:** "Stable intermediate" and "stable high" groups were related to increased risk for child's total problems: OR 3.62 and OR 5.68, respectively, when compared to "stable low"-group. Moreover, they associated with child's externalizing problems (OR 1.86 and 2.00) and internalizing problems (OR 2.99 and 5.13, respectively, all p's<0.001). The results remained controlling for significant confounding factors. Interestingly, group A was not associated with child's SEP (OR 0.95, p=0.942) whereas group B did (OR 4.15, p=0.004). The analyses of fathers' longitudinal depression trajectories, their associations with child's SEP and the contribution of maternal and paternal depressive symptoms to SEP are in progress. **Conclusion:** Trajectories of maternal depressive symptoms indicated relatively high stability of depression from prenatal to 24mo postpartum. Maternal intermediate and high depressive symptoms associated with child's elevated socio-emotional problems. However, in small subgroups of mothers, prenatal depressiveness did not associate with increased level of child's problems if it ameliorated by 8 mo postpartum. In contrast, the children whose mothers developed depressive symptoms postpartum had increased risk for SEP at 24mo. Prenatal depressive symptoms of mothers seem to be persistent and also in that way increase the risk for socio-emotional problems of the offspring.

No. 64

A Treatment-Episode Level Evaluation of the Health Care Journey of Patients With Major Depressive Disorder and Treatment-Resistant Depression

Poster Presenter: John Sheehan
Lead Author: Carmela Benson
Co-Authors: Bingcao Wu, Kamal Mangla, Qian Cai, Nancy Connolly, Larry D. Alphs, M.D., Ph.D.

SUMMARY:

Background: Treatment-resistant depression (TRD), often defined as failure to achieve adequate response to ≥2 antidepressant treatment trials of adequate dosage and duration, is associated with higher symptom severity, more comorbid conditions, poorer quality of life, and higher risk of suicide compared with non-TRD major depressive disorder (MDD). The objective of this study was to describe and characterize MDD and TRD at the level of treatment episodes. **Methods:** Adults (≥18 y) with a MDD episode treated with an antidepressant (AD; with or without an antipsychotic [AP]) between January 1, 2010 and December 31, 2015 were identified from the Truven Commercial and Medicare Supplemental Insurance claims database. All patients had continuous enrollment of ≥12 months pre- and post-index date (defined as the date of a first MDD diagnosis). An episode started on the date of a first MDD diagnosis for which there was a preceding 180-day period without a MDD diagnosis; an episode ended on the date of the last MDD diagnosis or the end of the days' supply of AD/AP medication, whichever came last. TRD was defined as progression to ≥3 AD/AP regimens in a single episode. The last AD/AP regimen was not counted as a failure. TRD and non-TRD episodes were characterized by evaluating number of lines of therapy (LOTs), episode length and proportion with relapse. **Results:** Among 48,698 patients with ≥1 treated MDD episode, the mean (SD) age at index date was 39.2 (15.4) years, 61.8% were female, and 95.0% were covered by commercial insurance plans. The most commonly observed comorbidities included hypertension (16.9%), hyperlipidemia (15.1%), anxiety (11.8%), diabetes (6.9%), and substance use disorder (6.6%). 48,440 patients received AD/AP treatment in their first MDD episode; 6.8% of these episodes qualified as TRD. TRD episodes averaged 3.5 (0.8) LOTs and 571 (285) days duration, during which 13.7% of patients relapsed. Non-TRD episodes averaged 1.2 (0.4) LOTs and 200 (198) days duration, during which 9.6% of patients relapsed. Following their first episode, 1,739 patients had a second treated episode on average 403 (225) days later. Among second episodes, 5.3% were TRD and averaged 3.4 (0.7) LOTs and 482 (220) days duration, during which 12.9% of patients relapsed. In contrast, second episodes without TRD averaged 1.2 (0.4) LOTs and 166 (154) days duration, during which 7.5% of patients relapsed. **Conclusion:** This analysis takes a somewhat novel, episodic approach in evaluating the health care journey of patients with MDD. These results suggest that, compared with other patients with MDD, those with TRD experience longer episodes, and a higher proportion of these episodes include a relapse. These findings may help develop ways for more rapid identification of and earlier intervention in TRD in order to reduce patients' burden. This study was funded by Janssen Scientific Affairs, LLC.

No. 65

Rapastinel, a Rapid-Acting Antidepressant, Does Not Adversely Affect Cortical Network Oscillations: A Quantitative EEG Study in Rats

Poster Presenter: Kelly Krogh
Co-Authors: Pradeep Banerjee, Elise Esneault, John Donello

SUMMARY:

Background: Rapastinel (GLYX-13, AGN-241659) is a rapidly acting N-methyl-D-aspartate receptor (NMDAR) modulator with partial agonist properties in development for major depressive disorder. High-frequency neuronal network gamma oscillations in the brain have been linked to higher-order brain function, including cognition and sensory perception. Ketamine and other NMDAR antagonists, at subanesthetic doses, induce psychotomimetic effects. In rodents, NMDAR antagonists increase high-frequency gamma oscillations, an electrophysiological effect correlated with acute psychosis. In this study, the effects of rapastinel and ketamine on cortical network oscillations were evaluated in rats using quantitative electroencephalography (EEG). Methods: Rats (n=14)

were anesthetized and surgically implanted with 2 surface electrodes in the frontoparietal cortex and a ground electrode in the right occipital cortex. Using a cross-over design treatment schedule, rats were placed on a treadmill and injected 15 minutes before each 1-hour test session with antidepressant doses of rapastinel (3, 10, or 30 mg/kg, IV) or ketamine (30 mg/kg, IP). Each week, a control session was performed followed by a test session 24 hours later. Test sessions were divided into 6 intervals of 10 minutes with the treadmill alternatively turned on (vigilance-controlled) and off (vigilance-uncontrolled). Telemetric outputs were quantitatively analyzed using a fast Fourier transform algorithm. Mean percent change in absolute cortical spectral power versus control was calculated in 5 sub-frequency bands (delta: 1-4; theta: 4-8; alpha: 8-13; beta: 13-36; gamma: 36-64 Hz) under each testing condition. Data were analyzed using the Wilcoxon signed rank test (two-tailed). Results: Under vigilance-controlled conditions, rapastinel 30 mg/kg slightly but significantly decreased mean cortical spectral power in the alpha frequency (91.8% of control; P<.05); under vigilance-uncontrolled conditions, rapastinel 10 mg/kg weakly but significantly increased power in the beta frequency range (104.4% of control; P<.05). Ketamine treatment significantly increased power at the gamma frequency range under vigilance-controlled (148.4% of control; P<.05) and uncontrolled (147.1% of control; P<.05) conditions; increases in power at the gamma frequency range were also observed for all time intervals (P<.05). No mean effects of rapastinel or ketamine were observed at other frequency ranges. Conclusion: There was no clear and/or robust effect of rapastinel on EEG activity at any frequency range. Differences between rapastinel and control were small and inconsistent across time points. In contrast, a significant increase in gamma oscillations was seen with ketamine at each time interval and under each condition. These results suggest that doses of rapastinel that have previously demonstrated rapid antidepressant activity may lack hallucinogenic or psychotomimetic potential.

No. 66

Treatment and Rehospitalization Patterns of Patients Hospitalized for Major Depressive Disorder

Poster Presenter: Kenneth Kramer
Co-Authors: Sanjida Ali, Pamela Landsman-Blumberg, Marla Kugel

SUMMARY:
Background: Major depressive disorder (MDD) accounts for approximately 1.1% of all hospital admissions. These MDD-related hospitalizations are a significant burden on patients and healthcare systems. Improving care to patients hospitalized for MDD is an ongoing area of need. The objective of this analysis was to assess treatment patterns and readmission rates among MDD hospitalizations. Methods: An analysis of the Premier Perspective® Hospital Database was conducted using records of hospital admission for MDD on any date from January 1, 2014 to December 31, 2015. Hospitalizations had to have an admission diagnosis of single-episode MDD (International Classification of Diseases, 9th Revision, Clinical Modification [ICD-9-CM] diagnosis code 296.2 or 10th Revision [ICD-10-CM] code F32) or recurrent episode MDD (ICD-9-CM 296.3, ICD-10-CM F33). Treatment patterns and time to hospital readmissions for MDD were analyzed. Treatment and readmission patterns were additionally analyzed in subgroups of patients with suicidal ideation (codes V62.84 [ICD-9-CM] or R45.851 [ICD-10-CM]) and suicide attempt (codes E950-E959 [ICD-9-CM] or T14.91, X71.0XXA – X83.8XXS, Z91.5 [ICD-10-CM]). Results: Among MDD hospitalizations (N=136,704), 63.6% of stays included a serotonin-norepinephrine reuptake inhibitor, 58.5% a selective serotonin reuptake inhibitor, 44.1% an atypical antipsychotic (AAP), and 0.2% ketamine; 68.9% included an antidepressant/AAP combination treatment. Antidepressant treatments were started around day 2, with the exception of ketamine, which was started around day 9. Of MDD hospitalizations, 6.1% involved a suicidal attempt and 53.7% suicidal ideation. Suicidal attempt hospital stays were associated with less AAP use (36.3%) than suicidal ideation (44.1%) and no ideation/attempt (45.2%). A similar pattern of use was observed with combination therapy (attempt, 62.1%; ideation, 69.8%; no ideation/attempt, 68.7%). Non-prescription therapies (eg, individual, group, and/or electroconvulsive therapy) were administered during 12.6% of stays. Among patients with MDD that had a

hospital readmission (N=14,375, 12.6%), 63.1% had a readmission for MDD within 30 days. Mean days between hospitalizations decreased with each subsequent admission, from 92 days between 1st and 2nd stay, to leveling off at 45 days after 4+ stays. By the 4th stay, mean days between hospitalizations was shorter for patients with suicide attempt (61.5 days) and suicidal ideation (62.8 days) than no ideation/attempt (74.8 days). Conclusions: With current antidepressant treatments taking 4-6 weeks to establish an effect, there is a need for rapidly acting medications that may help reduce MDD readmission rates.

No. 67

Dementia Syndrome of Depression (Pseudodementia): Evaluation and Diagnosis

Poster Presenter: Kevin Simonson, M.D.
Co-Author: Veronica Scott

SUMMARY:

A 65 year old female is hospitalized after attempted suicide by walking into traffic. On admission, she is amnestic, slow to respond, tearful, confused, and guarded. She responds to most questions with "I guess," "I don't know," or "I'm not sure." The patient's children describe her 10 year history of episodic depression associated with memory deficits during exacerbations. Work-up includes normal neuroimaging studies, a low vitamin B12 level, elevated homocysteine, and normal methylmalonic acid levels. A Montreal Cognitive Assessment (MoCA) is administered on three separate inpatient days with a score of 20/30 each time; deficits are in delayed recall, attention, and visuospatial processing. Occupational therapy is unable to complete a Kohlman Evaluation of Living Skills (KELS) assessment due to the patient's low frustration tolerance and increased irritability. Her score on the Allen Cognitive Levels (ACL) assessment indicates deficits in ne w indepe ndent learning and ability to anticipate or correct mistakes. Given aforementioned factors, the patient is diagnosed with recurrent major depressive disorder and dementia syndrome of depression. She is restarted on her previous outpatient medication regimen of Lexapro and Seroquel and is provided with vitamin B12 supplementation. When elderly patients present with neurocognitive deficits in the context of a history of depression, common causes of reversible dementia should be worked-up with a thorough history, detailed medication list, neuroimaging, laboratory studies, formal cognitive assessment, and careful observation. Depression in the elderly is complex, often presenting in an atypical fashion, and may or may not co-exist with organic dementia. Although research is limited, some studies suggest that more than half of patients with "pseudodementia" progress to dementia. After serious and potentially reversible disease has been ruled out, the physician may need to observe the patient for progressive cognitive deterioration over a few months before a firm diagnosis of dementing illness is appropriate. Although treatment of depression may not cause complete resolution of cognitive impairment, it is nonetheless important to treat depression in patients in order to improve their quality of life.

No. 68

Gaze Behavior Among Patients With Major Depression Disorder When Looking at Their Own Present-Day Face

Poster Presenter: Lyubomir I. Aftanas, M.D., Ph.D.

SUMMARY:

Background. It is generally accepted that there are three characteristics of abnormal self- concepts in depression: increased self-focus, attribution of negative emotions to own self and increased cognitive processing of the self. In view of this self- face processing plays a vitally important role in the study of complex conceptions of self as well as its aberration in depression. Methods. In this study, 52 adult patients with MDD and 33 age and sex matched healthy controls were instructed to look at basic facial expressions while their gaze movements were recorded by an eye-tracker. Eyes were tracked while participants viewed centrally displayed facial expressions (angry, happy, sad, neutral, neutral famous and self-faces taken immediately before the study) for 15 s. Gaze data were first analyzed using traditional measures of fixations over two preferential regions of the face (upper and lower areas) for each presented stimulus. Measures of biases in initial orienting and maintenance of attention were assessed within the perceptual window of 0-3 s after stimulus onset. The

participants also rated the complete set of the presented faces for the perceived intensity of 12 primary and secondary emotions in every face type. Results. Results first confirmed that presented with the own face patients manifested a gaze preference toward the lower-face whereas controls showed evenly distributed gaze activity over the upper- and lower-face zones ($p < .01$). Beck Depression Inventory (BDI-II) scores significantly negatively correlated with the mean fixation time ($r=-0.51$; $p < .01$) on the upper-face region of the own face. What is mire, BDI-II scores significantly positively correlated with the perceived intensity of shame ($r=0.61$; $p< .001$), guilt ($r=0.58$; $p < .01$), disgust ($r=0.44$; $p < .01$) and sadness ($r=0.55$; $p< .05$) of the self-face. Conclusion. This study demonstrates that, looking at own faces, representing current emotional state, controls and patients do not prioritize or ignore the same facial areas. MDD patients mainly adopted a focused-gaze strategy, consisting in focusing only on the lower part of the face. This consistency may constitute a robust and distinctive "social signature" of emotional self-identification in depression. Healthy controls, however, were more dispersed in terms of gaze behavior and used a more exploratory-gaze strategy, consisting in repeatedly visiting both facial areas. The finding allow to suggest that attentional strategy for the active avoidance of upper-face features along with percieved negative emotionality (shame, disgust and sadness) of the self-face may be regarded as important potential markers of a distorted self-concept in MDD.

No. 69

Catatonia: The Potential Cost-Effective Benefits of a Lorazepam Challenge in an Often Overlooked Clinical Syndrome

Poster Presenter: Asif H. Khan, M.D.
Co-Authors: Zaira Khalid, M.D., Kyle Rutledge, D.O., Ph.D.

SUMMARY:
Introduction: Catatonia is often an over-looked clinical syndrome in inpatient psychiatric units, emergency room departments and medical floors. Catatonia can occur in the context of many psychiatric and medical conditions. Within the psychiatric domain, it can occur with affective disorders, psychotic disorders and autism, along with symptom overlap with life-threatening neuroleptic malignant syndrome. Catatonia can present in two general states; hypoactive or hyperactive. In hypoactive catatonia, exhibition of waxy flexibility, motoric immobility, negativism, akinesia, mutism and echophenomena are common. On the other hand in hyperactive catatonia, bizarre, purposeless, stereotyped speech and motor behaviors are commonly exhibited. Among catatonic psychiatric inpatient hospitalizations, 50% are related to mood disorders, and approximately 10%-20% are associated with schizophrenia. 1 Case Report: We report an interesting case of a 53-year-old African American female with history of bipolar disorder who presented with worsening depression and mood congruent persecutory auditory hallucinations. She presented to a free-standing psychiatric unit from the ER and was non-communicative to the point of mutism with paucity of thought and speech and became isolative to her room with refusal of food and fluids. Complete blood count (CBC) was unremarkable, in addition to negative alcohol and drug screens. Her baseline complete metabolic panel (CMP) was evident for signs of malnutrition. Despite being mute, her auditory hallucinations and paranoia continued, complicating the clinical picture. Her home medications of aripiprazole 2mg daily and divalproex sodium 1500mg daily were withheld empirically while awaiting valproic acid levels, which were ultimately found to be supratherapeutic at 127 with an ammonia level of 61. She was subsequently started on levocarnitine without any clinical improvement. While patient continued to decompensate – and transfer to medical emergency room from the psychiatric facility was being considered – she was challenged with lorazepam to rule out catatonia. Patient showed a dramatic response to 1mg IM lorazepam such that within minutes she requested a snack to eat after refusal of meals several times. She was subsequently started on scheduled lorazepam with continued improvement over the course of the next several days. Discussion: This case illustrates the benefit of early recognition and treatment of catatonia in the context of a clinical picture complicated by the overlap of symptoms with depression and psychosis. The case also illustrates that with due diligence in

clinically suitable cases, the lorazepam challenge alone can prevent further unnecessary interventions and reduce the cost of care.

No. 70

Psychological Testing for Diagnostic Clarification, Understanding the Interpersonal Functioning of the Patient, and Therapeutic Success

Poster Presenter: Bahman Amadi, M.D.
Co-Authors: Danielle Guild, Ph.D., Lioubov Leontieva, M.D., Ph.D.

SUMMARY:

Background and Significance: The themes of patients' delusions can be helpful in understanding the psychological mechanisms associated with their origin, and may also inform the use of targeted therapeutic interventions for individuals experiencing psychosis. We present the case of a 51-year-old man admitted to an inpatient psychiatric unit with acute exacerbation of erotomanic delusions and auditory hallucinations. The patient was a loner whose psychiatric symptoms began at the age of 36 when he stalked a woman he loved in high school, who did not remember him. At the age of 43, he was still living with his mother, and his sister noticed that he appeared slowed down. He was first admitted to acute psychiatric care at the age of 49, after he jumped out of a window due to the belief that he was being chased and punished by the devil. He was admitted again at the age of 51 after he went to the police stating that he was being controlled by external forces. While on the unit, he was stabilized on haloperidol and underwent psychological testing. Method: The patient was administered the MMPI-2, the Rorschach Inkblot Test, and the Thematic Apperception Test (TAT) for the purpose of diagnostic clarification to differentiate between schizophrenia spectrum disorder versus psychosis of alternative etiology. Results: The patient produced an exaggerated MMPI-2 profile that could be only interpreted with caution. He endorsed an unusual number of psychotic symptoms that may have been indicative of a cry for help. Specifically, his highest elevations were seen on the Paranoia, Schizophrenia, and Depression scales. The Rorschach (Exner interpretation system) was indicative of a serious impairment of logical thinking, circumstantial reasoning, an inability to process information thoroughly, a lack of consistent coping style, less psychological complexity than most people, and a limited capacity for attachment to others. On the TAT, the patient had significant themes of interpersonal conflict and war, concerns about sexual impulses and the fear of acting out, and denial of anger and depression due to anger turned inward. Taken together, the results of these assessments revealed themes of past abuse, invalidation of feelings, and unmet love needs. Conclusions: In this case psychological testing revealed the presence of a thought disorder and helped in understanding the underlying dynamic of this patient's delusional themes stemming from past abuse, emotional deprivation, and early childhood invalidation. These experiences shaped his delusions of being the chosen romantic partner for a woman he had an autistic love for and of being punished by God for his perceived shameful fantasies.

No. 71

"They Are Coming to Hurt Me": Psychosocial Aspects of the Central American Refugee Crisis, and the Need for Cultural and Structural Competence

Poster Presenter: Jonathan Gomez

SUMMARY:

Background: The United States faces an unprecedented influx of refugees from El Salvador, Honduras, and Guatemala, the "Northern Triangle Region," an area devastated by growing violence, poverty, and documented extremely high rates of trauma and psychopathology. Our paper presents a 19-year-old male from El Salvador with Posttraumatic Stress Disorder brought to the psychiatric ER in meth-induced psychosis. His early childhood trauma in destabilized Central America put him at overwhelming risk for psychiatric illness. His meth use began as forced exposure during migration, nonetheless, his arrest under the influence made him a target for deportation. Through collaboration with legal professionals, we were able to keep him safe, stabilize his mental condition, and discharge him to a mandatory detox facility. Discussion: While presentations like Javier's are not unique to our unit, his presentation required unique cultural awareness of the psychosocial issues facing the Central American population, to discern

his delusions from fact. We also had to avoid implicit biases as clinical confounders. Furthermore, our interdisciplinary collaboration with his lawyer proved essential to ensure his safety from deportation and appropriate follow-up outpatient. Conclusions: As the population of Central American refugees in the United States continues to grow, psychiatrists must make themselves aware of the unique psychosocial issues facing this population, as well as implicit biases associated with the community, to provide appropriate care. Furthermore, we must employ structurally competent approaches to address the unique barriers they face in the mental health system, including: collaboration with law enforcement, immigration lawyers, school-systems, and other support systems.

No. 72

African American Youth Killed by Police: Suicide or Conduct Disorder

Poster Presenter: Sohail Amar Nibras, M.D.
Co-Author: Alicia Barnes, D.O., M.P.H.

SUMMARY:

Sean a 17-year-old African American (AA) Male with past psychiatric history of Attention Deficit Hyperactivity Disorder (ADHD), Major Depressive Disorder, Cannabis Use Disorder presented to child and adolescent community psychiatry clinic for an evaluation. Sean presented with chief complaint of "a mental break down at school". His behavioral issues started as early as elementary school. His behaviors became more verbally aggressive worse in 8th grade when Michael Brown was killed his mom noticed changes in his behavior, he was more aggravated, more irritable and sad, withdrawing, not participating. He began cannabis use at age 14. He was expelled from school for suspected distribution of marijuana in school. Sean describes his mental breakdown as unable to calm down and throwing chairs and running away from home. He stole his mom's gun and who then called police with a stolen gun report. He was incarcerated for 24 hours and then hospitalized for 5 days. He was started on Abilify, Wellbutrin, and Hydroxyzine. He was out of his medications for a month due to lack of immediate access to outpatient child psychiatry. During the evaluation, Sean was able to describe social stressors including domestic violence and economic hardship contributing to his the "mental breakdown". He denied suicidal ideations and risky behaviors during the evaluation. Subsequently, our clinic discovered that Sean was shot and killed by police, while in a stolen car with 3 other adolescents. Mom voiced concerns over the phone that her son was shot and did not believe the story told by police. In this poster, we discuss the complications of untreated depression and ADHD and lethal consequences of poor access to care. How do we address the criminalization of male AA youth as child psychiatrist? How Child and Adolescent Cultural Practice Parameters and National Culturally and Linguistically Appropriate Services Standards apply, should there be more specific parameters?

No. 73

Clinician Interest in Therapeutic Horticulture in Youth Mental Health Treatment

Poster Presenter: Rebekah Blume
Co-Authors: Julia Langer, M.H.S., Nicole Quiterio

SUMMARY:

Though much research has been done on the relationship between mental health and gardening (known as therapeutic horticulture, or TH), as well as into the benefits of gardening for children and youth, little research has been done on the specific benefits of TH on child and adolescent mental health. Because TH has been proven effective in reducing symptoms of mental illness in adult populations, it is likely to be effective in youth as well. A critical review of English-language research on TH identified no peer-reviewed studies on its mental health benefits for youth. Due to its success in adult populations, more research should be done into how TH can be incorporated into and adapted for youth mental health programs. TH programs at youth centers would in turn provide viable locations to further investigate the usefulness of TH for youth. Objectives: This study investigates the feasibility of incorporating a Therapeutic Horticulture (TH) program into a community youth mental health clinic. Methods: Child psychiatrists and therapists (n=27) received an anonymous 11-question survey, consisting of multiple choice, Likert scales, and select-all questions. The survey asked about the usefulness of three TH options (a communal gardening plot on site, supplies for individual

gardening projects, and a partnership with a nearby community garden) for specific programs, age groups, and how often each would be used. Results: 17 of the 27 questionnaires were returned. The mean score for overall favorability of any TH program was 7.8 (SD±1.46). There was no difference in response by location (t=1.14, p=0.27). 88.2% of respondents believed a communal gardening space at the youth clinic would be useful for the Intensive Outpatient Program (IOP), and 76.5% for individual therapy. 100% reported they would use such a garden with teens; 47.1% stated they would use it once a week, and 17.6% said they would use it multiple times a week. 82.4% of respondents reported they would utilize supplies for individual gardening projects for individual therapy. 88.2% said they would use such supplies with teens, and 35.3% reported they would use them multiple times a week. 70.6% of respondents believed a partnership with a community garden useful for the IOP, while only 47.1% believed in its usefulness for individual therapy, 88.2% in the usefulness for teens. 35.3% reported they would utilize a partnership once a week; zero reported they would use it more than once a week. Conclusions: Creating a communal garden at the clinic had the most positive response, with clinicians reporting they would use it for the IOP program and with their teen outpatients. This research suggests clinicians would welcome communal gardens at youth mental health clinics. This study was limited by small sample size.

No. 74

Group Therapy With Cognitive Remediation Therapy for Adults With Anorexia Nervosa

Poster Presenter: Gry Kjærsdam Telléus

SUMMARY:

Background: Inefficiency in set-shifting and central coherence is often observed in adult patients with anorexia nervosa. One hypothesis is that cognitive style influences disease persistence and the patient's response to treatment. The purpose of Cognitive Remediation Therapy (CRT) is to increase patients' cognitive flexibility by practicing new ways of thinking and also to make it easier for the patients to think in a bigger perspective. Thus, the purpose is to make patients aware of their own way of thinking. The aim of this study is to examine the long-term effect of CRT and to investigate whether patients who have received CRT achieve an increased flexibility after treatment in group-CRT. Methods: The study is ongoing with a longitudinal design with both qualitative and quantitative data. In- and outpatients in treatment for anorexia nervosa (anorexia nervosa or OSFED, - anorexia nervosa, atypica according to DSM-5) in the two participating centres (Department of Eating Disorders at Aalborg University Hospital and the Anorexia Clinic at Rigshospitalet, Copenhagen, Denmark) participated in six sessions of group-CRT according to the manual for group-CRT (the Maudsley & Bethlehem Treatment Manual) and were assessed at baseline, end of treatment and at 6-month follow-up. Assessment instruments: Physical assessment; EDE-Q (self-report instrument for measuring eating disorder symptoms) and DFlex (assessment of motivation and flexibility). Further, selected patients were sampled for qualitative interviews at the end of study. Preliminary results: Currently, 18 patients between 21 and 54 years of age are included in the study. EDE-Q global score: T0 (N=14) mean 2.76 (SD 1.08 – 5.15); end of treatment (N=14) mean 2.57 (SD 1.46 – 4.32); six month follow-up T0 (N=14) mean 2.10 (SD 1.27 – 4.31). Eight of the included patients have participated in a qualitative interview. The first process in the thematic analysis, exploring patients' experiences participating in group-CRT, points towards five themes: i) From self-focus, control and details to larger perspective: ii) From narrow-minded to broad-minded thinking; iii) Freedom from anorexia nervosa; iv) Change in behavior is possible; v) New perspectives on anorexia nervosa. Together the themes unify the participants' experiences of becoming more flexible with regard to thinking and behavior connected to anorexia nervosa. Preliminary conclusion: CRT in a group format appears to have a good effect in the treatment of patients suffering from anorexia nervosa as a supplement to standard treatment.

No. 75

Stage of Change Can Predict Treatment Outcomes in Adults With Anorexia Nervosa in an Outpatient Setting: A Prospective Cohort Analysis

Poster Presenter: Jessica E. Green, M.B.B.S.
Co-Authors: J. R. Newton, David Castle

SUMMARY:
Background: The Transtheoretical Model (TTM) which focuses on stage of change has been the main conceptual model used in understanding the lack of motivation to change in patients with Anorexia Nervosa (AN). Whilst there is evidence to support the prognostic value of the TTM in AN, this evidence base sufferers from limitations including limited studies in adults and no prior studies in outpatient populations. The primary aim of this study was to address a gap in research, and to clarify whether readiness to change, as measured by the University Rhode Island Change Assessment Scale (URICA) and the Anorexia Nervosa Stages of Change Questionnaire (ANSOCQ) could predict weight gain in adults with AN following treatment in an outpatient setting. Methods: This was a prospective cohort analysis, which selectively used data from an existing clinical database at an outpatient eating disorders service in Melbourne, Australia. 119 patients met eligibility criteria and were included in this study. This included all adult patients who had a diagnosis of AN and were assessed, but not necessarily treated at the outpatient eating disorders program (Group 1). A subgroup of 63 patients (Group 2) was also analysed which only included patients who had received treatment at the program. Baseline measures included the URICA score, the ANSOCQ score, the Eating Disorders Examination Questionnaire (EDE-Q) and body mass index (BMI). BMI was also measured on discharge. Results: The URICA scale had poor predictive validity for weight gain (Pearson's r= 0.05, p=0.725). However, the ANSOCQ had moderate predictive validity (Pearson's r= 0.57, p=0.007), and accounted for 32.7% of variance in weight gain. The URICA and ANSOCQ were moderately correlated in in Groups 1 (Pearson's r = 0.47, p=0.009) and 2 (Pearson's r = 0.46, p=0.031) with the URICA scores found to explain 22%, and 21% respectively of the variance in the ANSOCQ scores. The URICA scale was moderately predictive of symptom severity, measured by the EDE-Q in Group 1 and 2. The ANSOCQ was also moderately correlated with the EDE-Q scores in both Groups 1 and 2. Conclusions: To the authors' knowledge, this is the only study evaluating the TTM, in an adult outpatient population with AN. The findings of this study support the prognostic value of stage of change in predicting treatment outcomes in patients with AN. The findings suggest that while both the URICA and ANSOCQ were associated with eating disorder symptom severity, only the ANSOCQ was able to predict weight gain in outpatients with AN suggesting its greater utility in this context. This has important value clinically in terms of informing prognosis, and resourcing of services, as well as informing future research in this field.

No. 76

Systematic Review and Network Meta-Analysis of Psychological and Pharmacological Treatments for Bulimia Nervosa

Poster Presenter: Kristen D'Anci
Co-Authors: Jonathan Treadwell, Joann Fontanarosa, Karen Schoelles

SUMMARY:
Background: Numerous psychological and pharmacologic treatments are available for bulimia nervosa (BN). Methods: We performed a systematic review of the comparative effectiveness of available BN treatments, including pharmacotherapy, cognitive behavioral therapy (CBT), other psychotherapies, pharmacotherapy and psychotherapy combinations, and maintenance treatment. We searched 12 databases, including PubMed, PsychINFO, and EMBASE, and gray literature for randomized controlled trials (RCTs) addressing remission, binge eating and/or purging frequency, quality of life, mortality, eating disorder pathology, depression, anxiety, psychosocial functioning, dropout, and adverse events. To compare different treatment classes and pharmacologic treatments, we performed seven network meta-analyses. When network meta-analysis was inappropriate, we used either standard meta-analysis or qualitative summaries. Results: We included 47 RCTs. The prototypical patient was a woman in her mid-20s with a 4- to 10-year history of BN, body mass index of 21–24 kg/m2, binge-eating frequency of about 20–35 times per month, and vomiting frequency of about 30–45 times per month. CBT is more likely to cause partial remission of BN symptoms than non-CBT psychotherapy, but CBT and non-CBT psychotherapy result in similar reductions in binge-eating frequency. Self-help psychological interventions are associated with

greater treatment dropout rates than other intervention categories. For guided self-help CBT, Internet-based treatment has lower dropout rates than book-based treatment (Odds Ratio [OR]=2.75; 95% Confidence Interval [CI]: 1.26 to 5.99). Family therapy is more likely to result in symptom remission than supportive psychotherapy among adolescent patients (OR=3.26; 95% CI: 1.26 to 8.45). CBT plus 24 weeks of medication produces greater reductions in binge frequency and purge frequency than CBT plus 16 weeks of medication (Hedges' g=0.86; 95% CI: 0.05 to 1.67). Individual CBT followed by interpersonal therapy is superior to group CBT followed by interpersonal therapy with respect to partial remission (OR=0.33; 95% CI: 0.13 to 0.84), binge frequency (g=-0.48; 95% CI: -0.90 to -0.05), and compensatory behavior frequency (g=-0.63; 95% CI: -1.06 to -0.20). CBT plus medication is superior to supportive psychotherapy plus medication for increasing remission rates (OR=4.67; 95% CI: 0.99 to 22.03) and partial remission rates (OR=4.40; 95% CI: 1.04 to 18.60). The evidence for other comparisons (between different medications, between other CBT alternatives, between other psychotherapies, between other combination treatments, and between maintenance treatments) was insufficient to permit conclusions. Conclusions: Treatments for BN are typically psychological rather than pharmacologic. CBT is the most widely studied treatment, but it is unclear which CBT variants are optimal (e.g., individual versus group). In this difficult-to-treat population, high dropout rates limit inferences about comparative effectiveness.

No. 77

Evaluating Functional Disability in Clinical Trials of Lisdexamfetamine Dimesylate in Binge Eating Disorder Using the Sheehan Disability Scale

Poster Presenter: Alexandra Khachatryan
Lead Author: Karen Yee
Co-Authors: Robin Pokrzywinski, Asha Hareendran, Shannon Shaffer, Judith Kando, David V. Sheehan, M.D., M.B.A.

SUMMARY:
Introduction: Individuals with binge eating disorder (BED) often experience impaired function across work, school, social life, and family domains compared with those without BED. In order to explore functional impairment associated with BED, functional disability was assessed in adults with BED from lisdexamfetamine dimesylate (LDX) studies using the Sheehan Disability Scale (SDS). Objective: To examine the performance of the SDS in a sample of individuals with BED from LDX clinical studies and to explore the relationships between SDS scores and BED outcomes. Method: Post hoc analyses were conducted using pooled outcome data from 2 identically-designed, phase 3, placebo-controlled, dose-optimized LDX (50 or 70 mg) studies in adults with protocol-defined moderate to severe DSM-IV-TR–defined BED. Functional disability was assessed using the SDS (a prespecified exploratory endpoint), with participants rating the impact of BED on work, social life, and family life on 11-point scales (0=not at all to 10=extremely); SDS total score ranges from 0–30. Other assessments included the Yale-Brown Obsessive Compulsive Scale modified for Binge Eating (Y-BOCS-BE), Binge Eating Scale (BES), EuroQoL 5-Dimension 5-Level (EQ-5D-5L) health status index, and clinician-rated Clinical Global Impressions-Severity (CGI-S) scale. Analyses included evaluation of the psychometric properties of the SDS (item performance, factor analysis, reliability, and validity), of responsiveness over time, and responder analyses. Analyses were conducted without imputation of missing values. Results: The analyses included 724 participants. Mean (± standard deviation) baseline SDS total scores were 10.9±7.46. Confirmatory factor analysis supported a unidimensional SDS total score. Internal consistency (Cronbach's a) for SDS total score was 0.878. SDS total score exhibited good construct validity, with moderate correlations (all p<0.0001) being observed for the Y-BOCS-BE (r=0.350), BES (r=0.355), and EQ-5D-5L health status index score (r=–0.346). Known-groups validity of the SDS was demonstrated based on categorizing participants as "not ill" (CGI-S scores of 1–3) or as "ill" (CGI-S scores =4); mean (± standard error) SDS total scores were significantly lower in the "not ill" group (2.3±0.36) compared with the "ill" group (8.0±0.45) at the end of the study (p<0.0001). SDS total score changes from baseline to the end of the study were greater in treatment responders than in non-responders when response was defined as BE abstinence over the last 28 days of treatment (abstinent: –8.7, ES=1.18; non-abstinent: –5.8, ES=0.79) or based on BES score (score =17: –8.2,

ES=1.10; score >17: –4.5, ES=0.62). Conclusions: These post hoc analyses support the reliability and validity of the SDS in individuals with BED. The SDS demonstrated good internal consistency and validity, and was responsive to changes in BED clinical trial participants. (Sponsored by Shire Development LLC, Lexin

No. 78

The Behavioral Rapid Response Team and Assault Reduction at a VA Facility

Poster Presenter: Fe Erlita Diolazo Festin, M.D.

SUMMARY:

Background: The Inpatient Mental Health service at VA Boston was observing a surge of disruptive behavior and incidence of assaults between 2011-2014. The service felt that there was a dire need to come up with a protocol/model of care that would address disruptive behavior before escalating into a Code Green (psychiatric emergency) level while maintaining a safe environment for patients and staff. Methods: Hospital-wide patient data on the number of assaults were collected. A workgroup was formed with representatives from Nursing, Psychiatry, Psychology and Administration with a goal of finding patient-centered ways of decreasing assault rates. The workgroup recommended forming a Behavioral Rapid Response Team (BRRT)to provide consultation and early intervention for patients showing escalating anger and potential for aggressive behaviors. With support from administration and inpatient mental health leadership, the team was formed and implemented initially in the Inpatient Mental Health Service. A protocol was developed detailing indications for consulting the BRRT, staffing and key persons/responders, an electronic paging system to alert the need for the consultation, and an electronic progress note template to document the consultation, findings and recommendations. Inpatient Mental Health staff were educated and trained on the new protocol/model of care. Implementation was conducted in several phases and was piloted on the Mental Health units for 1 year. The next year, a roll-out to the Community Living Center (CLC) or the Geriatric/Extended care service was implemented. The following year, it was implemented in the Acute Medicine/Surgical services. Results: The Inpatient Mental health service was initially enthusiastic about the implementation of this model of care. Given that most of the staff had expertise on de-escalation, the BRRT was consulted frequently in its initial phase of implementation. By its second year, the inpatient mental health team was not utilizing the BRRT consultation as frequently as its initial phase of implementation. In the CLC setting, the BRRT was consulted frequently resulting in a dramatic reduction in the number of assaults from 63 assaults in 2013 to 13 assaults in 2015. The number of Code Green calls also decreased from 197 in 2014 to 81 in 2017. In Acute Medicine/Surgery services, there was also a dramatic reduction in the number of code greens from 148 in 2014 to 59 in 2017. Conclusion: This improvement in the delivery of care and early intervention to de-escalate patients with anger and potential for aggression was positively received by the different services in the medical center. We have continued the implementation of the BRRT and are currently on Phase IV of implementation by expanding it to the outpatient settings and community-based outpatient clinics.

No. 79

Changes in Psychiatric Emergency Room Visits Following the Boston Bombing

Poster Presenter: Gaddy Noy, D.O.
Co-Author: Amber Frank, M.D.

SUMMARY:

Objectives: This study examines the characteristics of patients seen by Psychiatric Emergency Services (PES) at a Boston-area community hospital following the 2013 Boston Marathon bombings. Methods: Demographics, prior diagnoses, trauma history, and presenting problems of patients evaluated by the Cambridge Hospital PES in the 2 months following the bombings were compared to those seen in the 2 months preceding the bombing. A subset of cases in which the bombing was explicitly mentioned was also examined in greater detail. Results: Post-bombing PES visits demonstrated a broad range of demographics, prior diagnoses and presenting problems. Only 36 evaluations (8.2%) out of 440 directly mentioned the bombings, of which only 13 presented with symptoms of PTSD or acute stress disorder (n= 13, 36.1%). New-onset PTSD symptoms

directly related to the bombing were rare (n= 4 evaluations), 11.1% of the 36. Conclusions: PES patients seen after a local terrorist event are likely to have a broad range of presenting problems and prior diagnoses. While presenting problems can include symptoms of PTSD or acute stress disorder related to the traumatic event, this may be a minority of the total population seen. While a PES plays a critical role in aiding those with mental health crises, it may not be the primary site where new cases of PTSD or Acute Stress Disorder are likely to be seen in the immediate aftermath of a terrorist attack.

No. 80

Patients in Psychiatric Crisis: Utilization of Hospital Emergency Services and Patient Characteristics Associated With Aftercare Noncompliance

Poster Presenter: Jana Lincoln, M.D.

SUMMARY:

Research estimates that 40-60% of individuals discharged from psychiatric inpatient facilities did not receive aftercare (1). Great efforts have been made to reduce follow-up noncompliance by providing contact information of mental health providers or scheduling appointments at discharge (2). Our objective was to understand patient characteristics associated with noncompliance with outpatient psychiatric follow-up. A six month, multi-site, prospective cohort study was conducted in an in-patient and out-patient setting. The goal was to assess differences in patients discharged with scheduled aftercare follow up appointment (Group1) versus patients dismissed without (Group2). The Human Subjects Committee approved the study. The primary outcome measure was patient ability to establish outpatient follow-up, yes or no. Participants were restricted to those with a GAF>40, between the ages of 18-65, and English as primary language patients. Historical data on emergency service utilization, both medical and psychiatric, along with psychiatric hospitalizations, diagnoses, and current medications were also collected. A novel evaluation tool was constructed to evaluate severity of illness (SIS). Participants were matched on SIS and risk factors for noncompliance to follow-up by patient characteristics were explored and constructed.

No. 81

Illegal Conversion Therapy or Reasonable Standard Care?

Poster Presenter: Evan Joshua Trager, M.D.
Co-Authors: Toshia Ann Yamaguchi, M.D., Joshua Valverde, M.D., Arlenne Shapov, M.D.

SUMMARY:

Introduction: Conversion therapy, a practice rejected by the mainstream scientific community, is meant to change an individual's sexual orientation, generally from homosexual to heterosexual. Beyond rejection from professional organizations, ten states have banned its use in minors under the premise that it may be more harmful psychologically than beneficial for patient and family. Case: A seventeen-year-old male presents to the psychiatric emergency room after his mother calls the police. The patient had been home when he approached his mother, stating, "I don't want to live like this; I wish God would take my life." In the ED, the patient appears anxious with elevated pulse rate and blood pressure. He reported SI without intent or plan. The patient is admitted to the child and adolescent unit and started on sertraline 25mg qD PO. Upon initial evaluation by the treatment team, the patient starts the interview by stating, "I think I have Homosexual Obsessive Compulsive Disorder" and explains that for the past several months he had been having distressing thoughts of a homosexual nature and that he would frequently find himself distracted by these thoughts. Thoughts included imagining himself kissing men. Despite this, he reported identifying as heterosexual and being sexually aroused by his girlfriend. He felt strongly that "living the life of a homosexual" was anathema to what he wanted personally, noting, "I don't want to die of AIDS." The patient and his family subscribe to two non-denominational Christian churches and praying would provide partial relief for the patient. During his hospitalization, Lorazepam PRN was added for severe anxiety. The patient reported improved obsessive thoughts and anxiety and was discharged after three days. He followed up with outpatient mental health and started a brief trial of quetiapine XR 300mg QHS PO, which was stopped after a bout of diarrhea. When his outpatient psychiatrist retired, the patient transferred providers. With the new provider, the

patient was titrated to sertraline 100mg qD PO and also prescribed trazodone 50mg QHS PO for insomnia. There was no improvement noted and sertraline and trazodone were discontinued. He was started on risperidone 1mg QHS PO and fluoxetine 20mg qD PO. The risperidone was not well-tolerated, but patient responded well to the fluoxetine with reported 50% improvement in obsessions and preoccupations. Fluoxetine was titrated to 40mg qD PO. In conversation with different providers, family brought up considerations of alternative therapies, including HOCD centers and exorcism, the latter of which was ultimately performed by family members. Discussion: The family's interest in HOCD treatment led to research, which revealed the presence of multiple facilities in the surrounding area that market themselves as providing treatment for HOCD. We will explore further the implications of these treatments in light of the prohibition of conversion therapy in our jurisdiction.

No. 82

Violence in Forensic Hospitals: Links to Childhood Violence

Poster Presenter: Gowri Ramachandran

SUMMARY:

The purpose of this study is to consider how childhood exposure to violence or abuse may contribute to the onset of violent behaviors in individuals with severe mental illnesses; many of these patients may ultimately be hospitalized in a forensic setting. Furthermore, the perpetration of violent behaviors once hospitalized will be explored, to determine the role of childhood exposure in such behaviors. There is a plethora of research that supports the underlying principle that violence is a learned behavior; furthermore, there is research that confirms that violence increases when substance abuse is a comorbidity. However, there is a dearth of data that addressees how other psychosocial or demographic variables, such as socioeconomic status, education, race, and age (amongst other factors), may be implicated in exposure to childhood violence and abuse. In this study, we seek to examine the variables that may contribute to exposure to childhood violence or abuse. Furthermore, we aim to investigate the relationship between this childhood exposure and the subsequent development of violent behaviors, prior to and during forensic hospitalizations.

No. 83

Differences in Violence Risk Between Prison- and Hospital-Detained Major Offenders Not Criminally Responsible Due to Psychiatric Disorder

Poster Presenter: Henrique Prata Ribeiro

Co-Authors: André Ponte, Marco Duarte, Beatriz Lourenço, Sandra Jesus, Andrew Molodynski, Sílvia Alves, Fernando Vieira

SUMMARY:

Psychiatric patients who are considered Not Criminally Responsible (NCR) for an offense are, under Portuguese Penal Code, detained in a forensic psychiatry unit. There are two types of forensic psychiatry units in Portugal: inside a psychiatric hospital; inside a prison. This study aims to characterize the population of NCR patients who have committed major offenses, and using the HCR-20, a structured risk assessment tool, compare the violence risk between prison and hospital detainees, to understand if higher risk patients are in fact being sentenced to prison facility treatment. The population of both hospital and prison settings were given informed consents, sociodemographic data were collected, and HCR-20 was used to assess each patient's level of violence risk. Statistical analysis was performed using SPSS (version 22.0) for both HCR-20 results and sociodemographic data. 86 NCR patients who had committed major offenses were included in the study. No significant differences were found in the sociodemographic characteristics of prison (n=34) and hospital (n=52) populations. These characteristics included age; time of confinement; the number of previous hospitalizations; previous convictions; marital status; previous psychiatric treatment; previous psychiatric hospitalization; diagnosis. After this analysis, HCR-20 for both groups was compared. Statistically relevant differences were found in the historical sub-scale and Total score of the scale, with no relevant differences being found neither in the clinical nor the risk management subscale. The results point out that both major offender populations are similar, concerning sociodemographic factors and higher HCR-20 results were found in the prison forensic psychiatry facility. This apparently shows hi

No. 84

Empirical Evidence on Fitness for Duty Exams

Poster Presenter: James Harry Reich, M.D.

SUMMARY:

Background: The ability of physicians to practice appropriately, often evaluated by a fitness for duty exam, is an important area of medicine. This report reviews the empirical literature on fitness for duty evaluations. Methods: A literature review was performed on PubMed using the terms physician, impairment, burnout, fitness to practice and fitness for duty. Results: Although the percentage of referrals varies by specialty and by how the samples were collected, at least one percent of physicians are referred each year for possibly serious difficulties. Surgery and its subspecialties and psychiatry may be at higher risk. Variables associated with fitness for duty evaluations include educational (better training is good), personality (stable temperament is good), culture (high levels of professionalism are good), emotional illness (single or multiple emotional disorders diagnosed is poor) and demographic (women get fewer fitness referrals.) Conclusions: Fitness for duty appears to be a relevant issue for medicine not only because of its frequency but also because of its effect on patients and colleagues. Risk factors appear to vary between modifiable (training, culture and treatable emotional illness), less modifiable (personality) and likely unmodifiable (specialty, gender). Because medicine is a self-regulating profession and there are a reasonable amount of fitness for duty requests this is an area that should be part of the training of all psychiatrists.

No. 85

Association of an Involuntary Medication Review Process in a State Psychiatric Hospital with In-Hospital Violent Events

Poster Presenter: Lily Arora, M.D.
Co-Authors: Kathleen Mencher, A.P.R.N., Kelsey T. Nason, John Luchkiw, M.S., Steven Jay Schleifer, M.D.

SUMMARY:

Background: The Involuntary Medication Administration Report (IMAR) process was introduced in New Jersey in June, 2012 as an alternative to judicial review to determine if medication may be administered involuntarily to patients considered a danger to self or others. An internal "three step" review process had previously been in place. At our 550 bed long-term state psychiatric hospital, IMAR utilizes a three member panel: an independent psychiatrist, hospital administrator and non-physician clinician. Characteristics of IMAR patients and processes, their course and time to resolution have been described previously. A key issue is the relationship of the IMAR process to in-hospital violence, both as an indicator of risk and as a component of clinical interventions. We examined IMAR history and violent behavior for a representative recent year. Methods: All IMARs conducted since program inception (2012) were identified including the time frame and clinical characteristics of each. Earlier IMAR history was examined in relation to aggressive incidents against others, self, or property for all patients hospitalized in 2015. Event frequencies, identified from mandated hospital reports, were adjusted to generate an annualized violent event (aVE) rate. Only IMARs initiated prior to Jan 1, 2015 were examined (patients enrolled in IMAR after Jan 1, 2015 were excluded). Three subgroups were identified: patients who were never enrolled in IMAR, those with IMARs completed prior to Jan 1, 2015, and those whose IMARs continued into 2015. We hypothesized that any history of IMAR, as a marker for violence risk, would be associated with subsequent violence and that future violence would vary in relation to whether medication administration was sustained. Results: Of the 959 inpatients from the 2015 dataset, 860 had not been referred for IMAR since program inception (2012), 75 had IMARs that had been "completed" prior to 2015, and 24 had IMARs that continued into 2015. The percentage of patients with any 2015 violent events was 50% for the no-IMAR group, 72% for those with completed IMARs, and 71% for ongoing IMARs. The mean+sd aVE were 5.2+11.7 for the no-IMAR, 8.7+10.7 for completed IMARs, and 4.4+5.2 for continuing IMARs. ANOVA revealed significant overall effects for IMAR referral (F 3.23, df 2,959, $p<0.04$); post hoc tests revealed higher aVE in patients with completed past IMARs compared with no-IMAR patients ($p<0.02$). While aVE in patients continuing on IMAR appeared lower than completed-IMAR and slightly lower than no-IMAR

patients, those differences were not significant. Discussion: These data suggest that patients previously assigned for involuntary medication remain at ongoing increased risk for violent behavior following status conversion to voluntary medication use. Factors that may account for these observations will be considered as well as the possibility that more extended IMAR use is associated with reduced risk.

No. 86

Effect of a Celebrity Suicide on Rates of Completed Suicide and Suicide Methods in the United States

Poster Presenter: Patrick Ying, M.D.
Co-Author: Ari B. Jaffe, M.D.

SUMMARY:

Background: Celebrity suicides garner significant interest from the public and the media. A number of media organizations have wrestled with guidelines for reporting celebrity suicide because of concern about potential "contagion" or "copycat" effects. Prior studies from other countries have demonstrated that celebrity suicide can predict spikes in suicide rates, and that reporting on specific means of suicide may affect the means used in the general population. Robin Williams' suicide, by suffocation, in August 2014 represented a widely reported suicide of a celebrity figure. Prior studies have shown that Mr. Williams' death was associated with an increased in online information seeking about suicide. This study endeavors to see if there is a discernible signal in a nationwide database consistent with a "contagion" effect on suicide rates or a "copycat" effect on suicide methods. **Methods:** Data for completed suicides in the United States between January 1999 and December 2015 was downloaded from the CDC's Underlying Cause of Death Database. This data is based on information from all death certificates filed in the U.S. The database was queried to extract cases where the "Injury Intent" was "Suicide" and the cases were sorted by month and "Injury Mechanism" which corresponds to method of suicide (Firearm, Suffocation, Poisoning, etc). A multivariate regression model was developed for a) all suicides, b) suicides by suffocation, and c) suicides by handgun. The model used month of year to control for seasonal variations in suicide rates, and a one-month lagging variable to control for secular trends in suicide rates and population increase over time. The month of, and immediately after, Mr. Williams' death were flagged as an additional potential predictor variable in the regression analysis **Results:** There was a clear spike in both total suicides and suicides by suffocation in the month of, and immediately following, Mr. Williams' suicide ($p<0.001$ for all suicides, $p<0.001$ for suffocations). In comparison with the number of suicides otherwise predicted by the regression model, Mr. Williams' death was associated with 413 excess suicides per month in August and September of 2014 (an 11% increase), and 272 excess suicides per month attributable to suffocation (a 27% increase). The effect of suicides by handgun, by contrast, was less marked (103 additional attributable handgun deaths, a 5.8% increase, $p<0.02$). **Discussion:** Consistent with prior studies showing copycat effects of celebrity suicides, these data demonstrate that the well-publicized suicide of Robin Williams was associated with an increase in the number of suicides reported nationally over that which would normally have been expected. A comparison of the rates of different means of suicide also indicated a copycat effect for the specific modality of suicide. These findings may have implications for the ongoing debate of how the media covers the suicides of prominent celebrities.

No. 87

Patterns in First-Line Antidepressant Prescribing in Geriatric and Disabled Populations Among Different Specialties in the Medicare Part D Program

Poster Presenter: Patrick Ying, M.D.
Co-Author: Ari B. Jaffe, M.D.

SUMMARY:

Introduction: Antidepressant medications are increasingly prescribed in the primary care setting. Studies of prescription databases suggest that psychiatrists prescribe only 21% of antidepressants in the United States. At the same time, access to psychiatrists for geriatric patients and the disabled is limited as psychiatrists represent the highest proportion of physicians opting out of Medicare (42%), and the specialty that is most likely not to accept new Medicare patients. Since 2015, CMS has publically released prescription data from the

Medicare Part D program at the provider level, indicating the specialty of the provider, how many prescriptions of each drug were written in total, and to patients over 65. Medicare Part D represents upwards of 72 percent of Medicare beneficiaries, for a total of 39 million patients. Methods: The Medicare Fee-For Service Provider Utilization & Payment Data Part D Prescriber Public Use File is available at https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Medicare-Provider-Charge-Data/Part-D-Prescriber.html Claims data for 2015 for first line antidepressants SSRIs, SNRIs, SPARIs (vilazodone and vortioxetine), mirtazapine and bupropion, were extracted. These were analyzed in four groups, psychiatry specialties, primary care (internal medicine, family practice, family medicine, general practice and geriatric medicine), nurse practitioners and other advanced practice nurses, and all other specialties. Results For Medicare Part D patients over the age of 65, psychiatrists were responsible for 13.3% of first line antidepressants, while primary care specialties wrote 70.8% of these prescriptions. Advanced practice nurses wrote 7.3% and all other specialties wrote 8.6%. This is compared to the Medicare Part D patients who are disabled, where psychiatrists wrote 24.0% of first-line antidepressants, primary care physicians wrote 52.6% and nurses and other specialties wrote 13.3% and 10.1%. Antidepressant prescribing patterns vary between specialties. SSRIs represent only 51.7% of first line antidepressant prescriptions by psychiatrists, while they represent 68% of prescriptions for primary care providers. Discussion Medicare Part D data appear to confirm the trend of antidepressant medications prescription in the primary care setting and the decreasing availability of psychiatrists in Medicare especially to the elderly. Non-elderly patients appear to have more access to psychiatrists, perhaps because of patients with psychiatric disabilities. Efforts to improve access for geriatric patients, perhaps through collaborative care models should be pursued.

No. 88

Increasing Interest of Mass Communication Media and General Public in the Distribution of Tweets About Mental Diseases

Poster Presenter: Miguel Ángel Álvarez de Mon

SUMMARY:

Introduction: mental diseases commonly provoke self-stigma and/or societal stigma. The social interest for mental disorders appears to be a key relevant factor for the adequate consideration of these mental diseases, for the understanding and support of the psychiatric patients and for funding support for medical investment and research. Thus, measurement of the social relevance of mental psychiatric disorders is a fundamental objective for progress in the field of psychiatry. Material and methods. We focused our study on tweets sent among a representative sample of primary American communication media. We selected the 15 media outlets with the highest number of followers on Twitter, as shown by their individual accounts. These Twitter accounts are openly available to the public and authored without any expectation of privacy, making them accessible data sources for researchers. Results: we analyzed the number of tweets generated by main American social media outlets on mental health disorders beginning in 2007, soon after Twitter was launched, until 2017. We also included as controls the parallel analysis of distributed tweets related to the primary causes of death in the USA (prostate, lung, colorectal and breast cancer, stroke, diabetes mellitus and COPD), the two most relevant chronic neurologic degenerative diseases (Alzheimer's and Parkinson's disease) and HIV infection. We also investigated the impact of mental and control tweets among social media followers by analyzing provoked responses, specifically the number of retweets generated. The number of retweets related to mental health diseases was 1,030,974. Interestingly, we observed a significant correlation between the number of tweets referring to each particular mental health disorder and the retweets that were subsequently generated . Conclusion: our findings show a marked correlation between the number of tweets generated by a psychiatric or control disease and the number of retweets generated. These results may represent a coincidence between the interest of communication media and the general population and/or merely the quantitative reactive response of followers to those tweets received. Interestingly, the frequency of retweets induced by content related to suicide was less than expected while that of gender

dysphoria greater. Moreover, there are contradictory results with respect to the associations between mental health problems and social media, culminating in either the potential for harm or significant improvement in social media engagement, as has been described.

No. 89

The Stigma Toward Mental Health in the Cinema

Poster Presenter: Miguel Ángel Álvarez de Mon

SUMMARY:

Introduction. Psychiatric patients, or those understood to be affected by mental illness, have had to counter the social phenomenon of stigmatization since the moment their pathologies were first classified. Film has oftentimes promoted this stigma, guided by an appealing narrative and captive audience more so than by an adequate depiction of mental illness. After a bibliographic review, 24 films were analyzed according to criteria found in relevant literature, whereby elements prompting stigmatization were identified, including: the presence of violence, the diagnosis of a protagonist, the role of women, staging and drug addiction. Hypothesis. 1. The stigmatization of mental illness is an added difficulty that furthers a patient's symptomatology and makes social inclusion ever more challenging. 2. Given its spectacular nature, film contributes to the creation of negative stigmas. 3. Cinematic elements that influence the process of stigmatizing mental illness are: the trivialization of mental illness, the application of elements of a morbid nature, the use of unjustifiable, disproportional violence and staging devices. Materials and Methods. 1. A bibliographic review: PubMed. Use of the MeSH search terms "mental illness", "mental disorder", "stigma", "movie", "cinema" and "film". 2. The selection of the filmography. 3. Viewing the films and analyzing them afterwards. Results 1.Errors and stereotypes in film: being a free and rebellious spirit, being a homicidal maniac, being a seducer, adulterer or flirt, being an elevated member, being a narcissistic parasite and being a zoo animal. 2.Elements leading to stigmatization: staging (lighting, sound effects, point of view, makeup and locations), the plot, and mental institutions and hospitals. 3.Regarding the role of the psychiatrist. 4. Analysis of the filmography: the most frequent type of stereotype represented: homicidal maniac (45.8 %). Conclusions 1. Patients with psychiatric pathology suffer from social stigmatization and self- stigmatization as a result of stereotypes, prejudices and discrimination.

No. 90

Addressing a Suicide Attempt by a Refugee: The Challenges of Cross-Cultural Psychiatry

Poster Presenter: Morgan Hardy, M.D., M.P.H.
Co-Author: Kelin M. Ogburn, M.D.

SUMMARY:

Meeting the mental health needs of refugees is an important issue facing psychiatry today. Refugees experience a high burden of mental illness due to trauma, displacement, and isolation. However, they also often experience tremendous language and cultural barriers to psychiatric care, creating challenges for the treating psychiatrist. We present the case of a 24-year-old female Burmese refugee with no known past psychiatric history who was admitted to the inpatient psychiatry unit of an academic medical center after a suicide attempt via ingestion of a household insecticide. The patient did not speak English. Due to limitations in the availability of interpretation services, the only method of communication was via interpretation through one of the patient's second languages, Hindi. Thus, conducting a detailed psychiatric interview was difficult. Her ability to participate in group and individual therapy was also limited. Clinical improvement had to be based totally on observing the patient in the ward milieu. While admitted, the patient did not demonstrate any objective signs or symptoms of depression or psychosis. She was cooperative and pleasant, but expressed an intense desire to be discharged in order to care for young children at home. She declined any psychotropic medication or referrals for psychotherapy after hospitalization. It was ultimately determined that continued involuntary hospitalization was likely to be more harmful than beneficial. She was able to develop a basic suicide safety plan and was discharged home. This case illustrates the challenges in treating refugees and other immigrants with diverse backgrounds and experiences, who may not respond well to the Western paradjgm of psychiatric care. It also

underscores the importance of adequate interpretation services and cultural competence in order to ensure safe and appropriate care. As refugee populations increase across the United States and Europe, better models of care are needed for addressing the mental health needs of refugees and responding to mental health crises within the refugee community.

No. 91

Involuntary Hospitalization in 1884: Stigma or Sickness?

Poster Presenter: Catherine R. Mier, M.D.

SUMMARY:

Background: The Athens Lunatic Asylum, established in 1874 by the Ohio legislature, abided by the moral treatment system between the years of 1878 - 1894. During this time, psychiatric commitments were undertaken on the principle of parens patriae. As such, the state acted for the presumed benefit of a person unable to act in their own best interests, effectively making all psychiatric hospitalizations, by definition, involuntary; a doctor's evaluation, accompanying an order from a concurring judge, was sufficient for psychiatric hospitalization for an unlimited duration. The contrast between this and the "dangerousness" criteria in use today, has led to decades of debate about whether asylums of that time were concerned more with caring for the afflicted, or with enforcing Victorian social norms. Methods: Petitions for commitment from the year of 1884 were reviewed for the months of January, April, July and October. Information on age, gender, county of residence, testifying physician and authorizing judge were collected, in addition to the moods and behaviors which led to the petition. In the 4 months reviewed, a total of 66 people were petitioned to the hospital. Of those, 4 were excluded due to being below the age of majority. Of the 62 remaining, 5 had no information about symptomatology; since at least 3 of those 5 were noted to be petitioned for readmission, the petitioners might have assumed that the hospital was already familiar with these patients' histories. Results: Of the 57 petitions reviewed, 31 (54%) were for females and 27 (47%) for males. 24 (42%) were noted to have predominantly psychotic symptoms, while 14 (25%) had symptoms characteristic of a mood disorder, and 5 (9%) had a combination of both. 8 (14%) of those petitioned had symptoms consistent with dementia or cognitive impairment. 9 of those with predominantly psychotic symptoms had cooccurring suicidality, homicidality, or self-care deficits. There were 6 (11%) cases in which the symptoms could be consistent with either a thought or mood disorder, or were too vague to classify (e.g. "periodic attacks of insanity"). Potentially 25 (44%) of those petitioned met the current "dangerousness standard" for involuntary commitment, either due to suicidality (19%), aggression or homicidality (25%), or a significant self-care deficit (16%) (defined by not eating or attending to activities of daily living). 16% had a combination of the three. Conclusions: Although there exists in popular culture a broad assumption that psychiatric hospitalization in the era before effective treatment was frequently for reasons of punishment or control, this brief review of the records demonstrates this was not necessarily the case. Of the 57 petitions reviewed, at least 70% appear to be for hospitalizations that would be deemed appropriate by today's standards.

No. 92

Open to Interpretation: Building an International Collaboration for Improved Child & Adolescent Psychiatric Care in Ukraine

Poster Presenter: Suki Katheryn Conrad, M.D.

SUMMARY:

In September 2016, three American physicians (a retired pediatrician, a child & adolescent psychiatrist, and a child & adolescent psychiatry fellow) embarked on a week-long trip to Ukraine. The goal was to form collaborations to improve the understanding, recognition, and treatment of child and adolescent psychiatric concerns. Ukraine is a relatively young country with a medical system that has retained much of its Soviet roots – with understanding of mental and behavioral health 50 to 60 years behind that of Europe and the United States. The focus of our initial trip was to introduce the idea of childhood trauma and how this impacts development, which we felt was pertinent considering the ongoing conflict on the eastern border, high rate of substance use, and economic depression with the known. Presentations were made in three cities: at the national children's

hospital in Kiev, to school psychologists in Zhytomyr, and finally a three-day Cognitive Behavioral Therapy for Obsessive Compulsive Disorder workshop for aspiring therapists in Lviv. Initial feedback from the first two sites was analyzed and suggested a need for education regarding neurodevelopmental disorders, specifically autism. While the first trip was a bit of a "crash course" in the nuisances of culture, future trips are being planned with the specific educational requests and with cultural considerations as the primary targets.

No. 93

Implementing Innovative Programs in Collaboration and Integration at an FQHC in New York City

Poster Presenter: Gertie D. Quitangon, M.D.
Co-Authors: Joseph G. Squitieri, M.D., Matthew Weissman, M.D.

SUMMARY:

INTRODUCTION: A comprehensive health care system that supports mental health integration has the potential to enhance healthcare experience, improve population health and reduce health care costs (Berwick, Nolan, & Whittington, 2008). Community Healthcare Network (CHN) is a Federally Qualified Health Center (FQHC) composed of twelve primary care clinics throughout New York City serving low income, uninsured, and underserved populations. This research study explores CHN's efforts at implementing integrated care practices, focusing on the recent expansion of behavioral health services network wide. We also look at elements essential to a sustainable integrated health care approach including implications for the professional quality of life of providers. MODELS OF INTEGRATION: (1)Disease Management Model CHN was awarded a grant to pilot the Impact Model at the Lower East Side and South Bronx clinics. CHN is also one of eleven clinics in New York State to pilot the Continuum-based Framework at the Tremont Clinic. (2) Reverse Co-location Set to open in April 2018, the East New York Health Hub (Hub) in Brooklyn is a partnership between ICL (Institute of Community Living) and CHN. At the Hub, CHN has its own FQHC within ICL's building and delivers medical services for ICL's patients.(3) Forward Co-location In forward co-location, specialty mental health interventions are available in primary care settings. CHN expanded behavioral health services and by the end of 2016, all CHN locations has from 0.4 to 1.0 FTE psychiatric providers and up to two 1.0 FTE behavioral health therapists. METHOD: We describe the workflow changes rolled out in 2017and compare productivity and no-show rates from May to June 2016 and May to June 2017. RESULTS: Workflow changes (1) Mental health screening process rolled out in January 2017 (2) Medication management visit modified from 15 to 30 minutes (3) Psychiatric evaluation remained 60 minutes (4) Weekly behavioral health team meetings initiated. Preliminary data suggests a 5% average drop in no show rate when comparing trends during three months in 2016 with the same three months in 2017. There was a 9% decrease in scheduled patients which could be explained by change from 15 to 30 minute med management visits. However, there was a higher proportion of overall patients seen. CONCLUSION: There are numerous considerations in the successful implementation of collaborative and integrated care such as target population, provider and service capacity, funding issues, and regulatory restrictions. CHN is laying down the foundation for full integration using the reverse co-location and disease management models, and close collaboration in a partly integrated system using the forward co-location model. Sustainable models of integration may be achieved by increasing opportunities to improve overall health outcomes while taking into consideration positive provider and organizational outcomes such as recruitment and retention, professional satisfaction, work engagement, productivity, and financial performance.

No. 94

Identifying Suicide Hotspots, Interventions That Took Place, and Future Areas of Work at a California University

Poster Presenter: Anders Krug Waalen

SUMMARY:

A suicide hotspot is a specific, usually public site, where more than one suicide has occurred. These locations necessitate preventive action because of risk of the "copy-cat effect." Although physical barriers have been shown to reduce suicides at hotspots by 93%, other deterrents include patrol

guards, call boxes, or signs with help line numbers, the latter reducing suicide risk by 61% in comparison. No research yet exists on the effectiveness of ground deterrents such as patio furniture and trees. Current guidelines recommend a long-term, multidisciplinary approach to data collection and evaluation of hotspots through Geographical Information System (GIS) software analysis. We investigated a California university with a history of suicide hotspots by collecting data on the frequency, time, and location of suicides on campus as well as the time and type of interventions that occurred since 2002. We also interviewed various administrative staff concerning mental health support and suicide prevention systems on campus. Three hotspots were identified. Suicides occurred most often on Thursday, in January, during hours of darkness, and in a particular plaza and parking structure designed with open-air architecture. Since the application of the interventions, suicides have declined dramatically within the past few years, although it is too soon to identify causation. Many of the school's interventions, such as barriers, call boxes, and signs followed international guidelines. Funding limitations posed a challenge to implementation of suitable barriers in the open-air architecture. However, the school's creative, low-cost solutions, such as ground deterrents, may have contributed to the decrease in suicides despite the previous lack of research on this topic. More monitoring is essential to verifying the effect of these interventions. It was found that no formal or shared approach of monitoring suicide data on campus existed. To keep necessary vigilance over these hot spots and protect against any health disparities, we suggest a GIS-mediated approach, as recommended by international guidelines, that also includes demographic data and police wellness interventions.

No. 95

Pre-Visit Engagement as a Way of Decreasing No-Show Rate to Integrated Psychiatry Appointments in Large Primary Care Settings: A Proposal

Poster Presenter: Ludwing Alexis Florez Salamanca, M.D.

Co-Authors: Stephen Paul Ferber, M.D., Stephanie Le Melle, M.D., M.S.

SUMMARY:

Background: Depression and anxiety are disabling conditions that affect one in four individuals in their lifetime. The response to treatment of those conditions is comparable with medical conditions, yet most individuals go untreated. The Collaborative Care Model is a cost-effective, systematic, evidence, population and team-based approach efficient in the management of depression in primary care settings. Columbia University Medical Center/New York Presbyterian Hospital have been implementing the collaborative care model in the largest primary care clinic within the hospital system, the Associates in Internal Medicine (AIM) Practice, where approximately 15,600 patients were served in 2016. Given the size and volume of the clinic, a warm handoff, as recommended in the collaborative care model, has not been feasible. One of the challenges we have encountered while implementing this model is a no-show rate to mental health appointments of 56%. Anxiety, ambivalence and poor understanding of mental health assessment have been identified as contributing factors to the high no-show rate in our integrated psychiatry model. Interventions aiming to improve attendance like phone call reminders, SMS reminders or letters sent by administrative staff have been implemented successfully in other settings, phone calls being the most effective. Those interventions however do not address ambivalence, anxiety and low motivation to attend. Hypothesis: Phone calls made by mental health clinicians with the specific aim to engage patients before the visit will decrease no-show rates. Study design: In a pre-post intervention study, we will measure no-show rates during 6 months before and after the beginning the intervention. Intervention: Mental health clinicians will call patients to remind them of their appointment and assess for barriers to adherence to care. This interaction will allow clinicians to start engaging and developing therapeutic alliances with patients before their initial assessment. By addressing stigma, motivation, anxiety, ambivalence, and explaining the assessment process over the phone prior to the visit, we believe that patients will be more motivated to come in. Following a standardized model, clinicians will contact patients one week prior to their scheduled visit. Statistical analysis: We will conduct a univariate comparison between the 2 study groups

using a Chi square method, with corresponding 95%CI and p Value. Implications: If proven effective, pre-visit engagement by mental health providers may improve overall effectiveness of integrated psychiatry in a large primary care settings. Preliminary results: During the first month of the intervention, the absolute risk reduction (ARR) was 16%, suggesting promising results.

No. 96

Efficacy of Transcranial Magnetic Stimulation in Veterans With Comorbid Posttraumatic Stress Disorder and Treatment-Resistant Depression

Poster Presenter: Gregory May
Co-Author: Melinda Ann Thiam, M.D.

SUMMARY:

Background: There has been an increase in public recognition of the severity impact of both depression and post-traumatic stress disorder (PTSD) on both active duty service members and veterans. Some studies have found that despite It has nearly 20% of veterans suffering from PTSD, only 50% seek treatment. Many of those who do seek treatment may not receive sufficient treatment or still suffer from both PTSD /depression despite aggressive treatment. In particular, while more veterans are seeking treatment, there remains an alarming estimated 22 veteran suicides occurring every day. Given such alarming statistic, it is imperative to identify new ways to treat both depression and PTSD in this population. Transcranial Magnetic Stimulation (TMS) is an FDA approved treatment for Treatment Resistant Depression (TRD) that has offered hope to service members with depression and has promise to offer treatment for PTSD. Method: This is a preliminary report presenting a case series of two different combat veterans treated in a network private practice clinic. Both were diagnosed with TRD and PTSD by a Military Treatment Facility and/or VA behavioral health clinic, but subsequently were referred to network psychiatric private practice for continuation of care. Patient A is an enlisted combat veteran who had PTSD/depression whose treatment was ineffective particularly due to poor tolerance of psychiatric medications and concurrent medical illnesses that prevented adequate dosing of tolerate antidepressant medications. Patient B is a retired officer who tolerated medication, but did not respond despite max doses of multiple medications in different classes. The objective measure for monitoring outcomes for both patients was the Patient Health Questionnaire (PHQ-9) which was given before, during and after TMS treatment. Results: Both patients received treatment of depression with TMS at our practice and were able to achieve clinical remission with average reduction of PHQ-9 decrease by 14 points. Additionally, Patient A was able to reach remission while being completely off medication. Conclusions: Depression and PTSD in military service members and veterans often comes hand-in hand. Treating depression with TMS led to remission of depression for both individuals and also led to significant treatment response for PTSD. Additionally, while still not officially FDA approved, there are current studies are in place examining specific use of TMS for PTSD. We found that in interim, treating the TRD can at times concurrently treat PTSD. In particular, with expansion of TRICARE authorizing TMS treatment by network providers, military retirees/veterans and family members now have potential access to a proven treatment modality for veterans with comorbid PTSD/depression.

No. 97

Is Post-Stroke Delirium in the Acute Phase Associated With Future Cognitive Impairment or Diagnosis of Dementia? A Review

Poster Presenter: Humna Fayyaz
Co-Author: Shilpa Srinivasan, M.D.

SUMMARY:

Background: The prevalence of post-stroke delirium has been estimated to be as high as 48% and has been associated with prolonged hospital stays, greater mortality, use of long-term care institutions or nursing homes, and overall worse functional outcomes. There is limited literature addressing the long-term consequences of post-stroke delirium on neurocognitive function. Historically, prospective research has focused on the physical disabilities and its improvement in the post-stroke setting, while longitudinal, prospective studies investigating cognitive impairment are fewer in number. Objective: To investigate whether delirium in the acute phase after initial stroke is associated with future cognitive impairment or diagnosis of

dementia. Methods: We conducted a literature search of MEDLINE with full text, CINAHL Plus with full text, Cochrane Library databases, Clinical Key, PubMed, and MedlinePlus and reviewed prospective and retrospective observational studies, review articles and meta-analyses that assessed the outcome of delirium in first time stroke patients. Eligibility criteria for the studies reviewed included first-time stroke patients admitted to an in-patient facility who experienced delirium in the first twelve days after stroke. The primary outcome measures in these patients were the diagnosis of dementia or cognitive impairment. Results: Six studies met criteria. A total of 889 patients were admitted for acute in-patient treatment of a stroke, with 323 patients receiving a diagnosis of delirium within 12 days after admission. Ojagbemi et al., Melkas et al., and Rijsbergen et al. found significant associations between patients who experienced post-stroke delirium and post-stroke dementia by the time of follow- up, compared to those who did not experience post-stroke delirium (RRR=4.3, 95% CI= 1.2- 15.6; OR= 2.65; OR= 4.7, 95% CI= 1.08- 20.42, respectively). The remaining studies examined the incidence of cognitive decline post-stroke in patients who experienced post-stroke delirium, relying solely on MMSE scores to assess for cognitive impairment. Discussion: Unlike known non-modifiable predictors of dementia, delirium in the acute phase after stroke can be treated and potentially prevented. Due to significant variability in methodology and outcome measures in the current literature, well-designed cohort studies are necessary to provide stronger evidence for the impact of delirium in the post-stroke phase potentiating cognitive decline or the future diagnosis of dementia. With more data supporting post-stroke delirium as a risk factor for the prognosis of dementia, clinicians may benefit from more emphasis and research on earlier recognition and management of delirium in the acute phase after stroke.

No. 98

Bioelectrical Impedance Analysis in Patients with Alzheimer's Disease

Poster Presenter: Kang Joon Lee
Co-Authors: Hyun Kim, Ji Hyun Roh

SUMMARY:

Background: Weight loss is a clinical feature of Alzheimer's disease(AD). These conditions predict the progression of cognitive impairment and increase the risk of complications and mortality. Various causal factors, such as metabolic alterations and neuropsychiatric disturbances have been proposed for weight loss. Bioelectrical impedance analysis(BIA) can be a valuable tool to assess changes in body composition. BIA is widely accepted as safe, time-saving and cost-effective. The aim of the present study was to compare the body composition characteristics of patients with mild to moderate AD with healthy controls, using BIA. Methods: This study included 40 patients with mild-moderate AD and 39 individuals with mild cognitive impairment who visited the dementia clinic in the department of psychiatry at the IlsanPaik Hospital for impaired memory. The control group consisted of 31 healthy individuals aged 65 to 90 years. The sample data for this retrospective, cross-sectional analysis was conducted from August 2015 to July 2017. Cognitive function was evaluated using mini-mental state examination(MMSE), clinical dementia rating(CDR), and global deterioration scale(GDS). Mini-nutritional assessment(MNA) was applied. Anthropometric and bioelectrical impedance measurements(InBody, Seoul, Korea) were taken according to standard procedures. Results: A chi-square analysis revealed that there was no significant difference in gender distribution among the groups ($p>0.05$). There were no significant age differences between either the AD group ($p>0.05$) or the control group ($p>0.05$) and the MCI group(mean age=77.28, 38.9% male). The mean MMSE-K score of the AD group was significantly lower than that for the other groups ($p<0.01$), but there was no significant difference in MMSE-K scores between the MCI group and the control group ($p>0.05$). Weight and Body Mass Index(BMI) values were lower in patients with AD than in controls. This bioelectrical pattern showed a reduction of lean body mass and an increase of percent fat mass in AD group. AD showed a further significant tendency to dehydration. The percent of skeletal muscle mass and percent of lean body mass positively correlated with MMSE-K scores($r=0.317$, $p=0.002$, $r=0.242$, $p=0.022$). The percent of fat mass negatively correlated with MMSE-K scores($r=-0.258$, 0.015). Conclusion: Patients with AD had lower lean body

mass and higher percent of fat mass than healthy elderly individuals. AD is characterized by a tendency to malnutrition and dehydration. The bioelectrical technique is a promising tool for the screening and monitoring of nutrition and hydration status in AD. No financial conflict

No. 99

Course of Neuropsychiatric Symptoms Until Death in Moderate to Severe Major Neurocognitive Disorders

Poster Presenter: Luis Agüera-Ortiz
Co-Authors: Isabel Castillo-García, Jorge López-Alvarez

SUMMARY:
Background: Neuropsychiatric Symptoms (NPS) have a high prevalence in patients with neurocognitive disorders but have been mostly studied in the mild and moderate stages of the disease. We performed a longitudinal follow-up of NPS in patients in the most advanced stages until death occurs. Methods: 317 patients with moderate to severe major neurocognitive disorder (dementia) (74% institutionalized, 26% community dwelling) were followed for 99 months and assessed every six months. Evaluation tools included GDS staging, cognition (SMMSE), behavior (NPI) apathy (APADEM-NH), depression (CDSS), agitation (CMAI), functionality (FAST, KATZ index, Lawton and Brody index) and quality of life (QUALID and QOL.AD). Results: Prevalence of NPS along all stages was 94.6%. Apathy is the most relevant NPS. It increases with dementia severity both measured with the NPI apathy item: (GDS4: 3,8 vs GDS7: 8,6; P<0,05) and the APADEM-NH: (GDS4: 8,4 vs GDS7: 52,2; p<0,001) while depressive symptoms diminish along time. GDS stage 5 is a turning point for NPS: apathy, agitation, aggression, anxiety, abnormal motor behavior and appetite disturbances increase from this stage onwards. Graphics of the evolution of the significant NPS will be shown. Apathy is the main correlate for the loss of quality of life. Symptoms course is different according to gender in the following NPS: depressive symptoms, anxiety, agitation/aggression and eating disorders. Women present lower mortality, slower course of dementia and reach more advanced stages. No NPS correlated with survival rates except abnormal motor behavior, that surprisingly had a positive influence in survivor. Conclusions: Apathy, agitation, aggression, anxiety, abnormal motor behavior and appetite disturbances become more relevant in the most advanced stages of major neurocognitive disorders. Clinicians should pay special attention to apathy, as it is the most severe NPS and exerts the main effect in the loss of quality of life.

No. 100

Reduced Autonomic Modulation of Blood Pressure and Shifted Sympathovagal Balance in Borderline Personality Disorder

Poster Presenter: Lennard Geiß
Co-Authors: Max Hilz, Thomas Hillemacher, Katharina Hoesl

SUMMARY:
Background: Borderline personality disorder (BPD) is a mental disease characterized by emotional instability and impulsiveness. Emotional instability is linked to sympatho-vagal imbalance. The findings of an association between BPD and arterial hypertension would suggest altered central autonomic cardiovascular modulation. Objective: To determine autonomic modulation of blood pressure and heart rate as well as the sympatho-vagal balance in BPD patients. Methods: In 30 BPD patients (24 women, mean age 38.5±9.62 years) and 30 age- and sex-matched matched controls (23 women, mean age 38.3±12.1 years), we recorded electrocardiographic RR-intervals (RRI), continuous blood pressure (BPsys, BPdia) and respiration (RESP) at supine rest. We calculated RRI standard deviation (RRI-SD), RRI coefficient of variation (RRI-CV) and square root of the mean squared difference of successive RRIs (RMSSD), low and high frequency powers of RRI (RRI-RRI-LFpower, RRI-HFpower), total RRI power (RRI-TP), ratio between low and high frequency powers (RRI-LF/HF-ratio), normalized units of low and high frequency power (RRI-LFnu/RRI-HFnu), low and high frequency powers of systolic blood pressure (BPsys-LFpowers, BPsys-HFpowers and baroreflex sensitivity (BRS). Psychopathology was assessed using Borderline Symptom List (BSL) and Beck Depression Inventory (BDI). We compared sociodemographic, autonomic and psychometric parameters between BPD patients and controls (t-test on normally distributed, Mann-

Whitney-U-Test on non-normally distributed data and chi-square-test on dichotomous data) and calculated correlation coefficients between autonomic and test parameters (Pearson or Spearman Rho; significance was assumed for p<.05). Results: RRI, RRI-SD, RRI-CV, RMSSD, BRS, RRI-total power, RRI-HFpowers, and RRI-HFnu were significantly lower in patients than controls. BDI scores, BSL scores, BPsys, BPdia, RRI-LF/HF-Ratio, and RRI-LFnu were significantly higher in BPD patients than controls. BSL and BDI scores of BPD patients correlated significantly with RESP and RRI-LFnu, and inversely with BPsys-HFpowers and RRI-HFnu. Conclusion: Our findings indicate that BPD patients have reduced sympathetic and parasympathetic cardiovascular modulation and compromised BRS, findings that are associated with an increased cardiovascular risk. Furthermore, more severe BPD symptoms shift the sympatho-vagal balance towards more sympathetic predominance which aggravates cardiovascular risk. Funding: No financial support was received for this study.

No. 101

Anxiety Resulting From Hemorrhagic Stroke to the Right Caudate Nucleus

Poster Presenter: Ming Lien, D.O.

SUMMARY:

Introduction: Caudate Nucleus may also control mood. Traditionally, abnormalities of caudate nucleus and surrounding Basal Ganglion lead to extrapyramidal movement disorders. Recent research also identified disorientation, headache, dysarthria, facial and upper limb motor deficit, abulia, visual amnesia. Case Description: A 53 year old white female with a prior hospitalization to the psychiatric unit for anxiety and panic attack against the background of post-traumatic stress disorder was readmitted for similar complaints: uncontrollable anxiety and panic attack believed to be triggered by stressful situations out of her control. Despite repeated efforts by herself and her family to calm her, her anxiety continued to worsen to the point of vomiting. For the first 4 days of her admission, anxiety, nausea, and dull headache persisted despite increasing dosages of hydroxyzine, ondansetron, and relaxation exercises. Other than stated above, patient had normal review of systems, mental status exam, and physical exam. Her SBP measured twice a day averaged around 160's with periodic spikes above 170's and DBP averaging in the mid 90's. On day five, pt presented with a slight left facial droop and ptosis, aphasia, eyes open and awake, making incomprehensible sounds, and delayed response to commands (Glasgow 12/15), abulia, and disorientation. Due to the neurological nature of these symptoms, we ordered a CT of the head which revealed an acute right frontal lobe ischemic stroke and an acute/ subacute left caudate nucleus hemorrhage with minimal mass-effect. Patient was transferred to Neurology critical care immediately. Discussion: While this patient's presentation of uncontrollable anxiety, nausea, and dull headache is not unusual for someone with a panic disorder, it varied from her baseline. Her baseline anxiety is characterized by psychomotor agitation complicated by facial tics, wringing her fingers, and fumbling with her shirt that resolves quickly with breathing relaxation exercises. Based on this case report, changes in the right caudate nucleus may have influence her mood. Furthermore, one must consider the patient's baseline to assess severity of presentation.

No. 102

The Study of Correlation Between Brain Function and Metabolism Basing on the Neural Circuits in Obsessive-Compulsive Disorder

Poster Presenter: Qing Fan

SUMMARY:

The imbalance in neurotransmitter and neuronal metabolite concentration within cortico-striato-thalamo-cortical (CSTC) circuit contributes to obsessive-compulsive disorder (OCD)'s onset. Previous studies showed that glutamate mediated up-regulation of resting-state activity in healthy people. However, there have been few studies investigating the correlational features between functional and neurochemical alterations in OCD. In this study, we utilized a combined resting-state functional magnetic resonance imaging (rs-fMRI) and proton magnetic resonance spectroscopy (1H-MRS) approach to investigate the altered functional connectivity (FC) in association with glutamatergic dysfunction in OCD pathophysiology. Three regions of interest were investigate, i.e. medial prefrontal

cortex and bilateral thalamus, for seed-based whole brain FC analysis as well as MRS data acquisition. There are 23 unmedicated adult OCD patients and 23 healthy controls recruited for this study. Besides abnormal FC within CSTC circuit, we also found altered FCs in large-scale networks outside CSTC circuit, including occipital area, limbic and motor systems. The decreased FC between bilateral thalamus and right MOG was correlated with glutamatergic signal within thalamus in OCD patients. Moreover, the FC between right thalamus and right dACC was associated with glutamate level in right thalamus, specifically in patient's group. Finally, the FC between right hemispheric thalamus and MOG was correlated with patients YBOCS compulsion and total score, while the right thalamic glutamatergic signal was associated with YBOCS compulsion score. Our findings showed that the coupled intrinsic functional-biochemical alterations existed both within CSTC circuit and from CSTC to occipital lobe in OCD pathophysiology.

No. 103

Attenuated Activation of Salience Network in the Patients of Obsessive-Compulsive Disorder During Thought-Action Fusion Task

Poster Presenter: Seung Jae Lee
Lead Author: Sang Won Lee
Co-Author: Younjae Chung

SUMMARY:

Background: The thought-action fusion (TAF) is a tendency of individuals to blindly establish causal relations between their own thoughts and external reality. In addition, there have been many studies to reveal the effects of TAF mechanism on the development of normal obsessive thoughts to abnormal obsessive thoughts. In this study, we tried to find the contribution of the TAF mechanism to the pathophysiology of OCD using functional magnetic resonance imaging (fMRI). Methods: A total of twenty-eight participants (14 OCD, 14 healthy control, all men) were recruited for this study. The mean age of all subjects were 22.21±3.95 (OCD) and 23.57±1.12 (control) years and right-handed in accordance with the Edinburgh handedness scale. During the functional magnetic resonance acquisition, participants were asked to judge how negative feeling they had with the following typed sentence: "I hope that … will soon be in a car accident." Participants were instructed to complete this sentence by filling the name of a close or neutral (living) person to them (close condition, neutral condition). A functional image data were obtained the 3.0T GE 750W scanner with 24ch head coil (EPI, TR = 2000ms, TE = 30ms, FOV = 23cm, acquisition matrix = 64 X 64, no gap). The 3D T1-weighted fast spoiled gradient echo were used for structural imaging acquisition. The SPM8 was used in fMRI data image processing and statistical analyses. In within-group analysis, maps of brain activation for each condition from the analysis by one-sample t-test. The differences of brain activation between the group were analyzed by two-sample t-test. Results: Behavior performance of the TAF task showed significant differences between control and OCD. In the close condition, the OCD group used more reaction time than the control group. In both condition, the control group felt more negative emotions than the OCD group. In fMRI analyses, the control group showed increased salience network activation in both condition (FDR corrected $p<0.01$). However, the OCD group showed activation only in the visual region in both conditions (FDR corrected $p<0.01$). In group comparison analyses, control group showed increased activation compared with the OCD group in both conditions (uncorrected $p<0.05$). In particular, when a person with a close relationship entered the negative sentence, the OCD group showed decreased salience network activation including amygdala compared with control group. Conclusion: The present study suggests that OCD might have dysfunction to assessment of emotional salience that can be related to TAF mechanism. Our results suggest that the OCD patients can have difficulties in an appropriate resource allocation to various emotional stimuli. This study was supported by Biomedical Research Institute grant, Kyungpook National University Hospital.

No. 104

Can Botulinum Toxin Alleviate Symptoms of Borderline Personality Disorder?

Poster Presenter: Tillmann Kruger
Co-Author: M. Axel Wollmer

SUMMARY:

Randomized controlled trials have shown that a

single treatment of botulinum toxin (BTX) injections into the glabellar region is able to alleviate symptoms of major depression (1–4). The mechanism by which botulinum toxin exerts this mood-lifting effect is not known. A possible mode of action is the interruption of a proprioceptive facial feedback loop that maintains and reinforces the depressed mood expressed by the contraction of these targeted muscles (5). The glabellar muscles, however, do not only express depressed mood but are centrally involved in the embodiment of all negative basic emotions such as sadness, anger, disgust, and fear. We hypothesize that glabellar injection of BTX does not specifically relieve depression but rather globally attenuates negative emotions associated with various psychiatric disorders. In this case borderline personality disorder (BPD) could represent an ideal new target for BTX injections because patients suffer from excessive negative emotions of any kind. Here we report the synopsis of by now more than 10 consecutive cases in which use of BTX led to a substantial reduction in previously treatment-resistant symptoms of BPD. All patients (age between 20–59 years) received botulinum toxin treatment with 29 U of onabotulinumtoxinA at five injection sites in the glabellar region during in- or outpatient treatment at Hannover Medical School and at Asklepios Clinic North–Ochsenzoll, Hamburg in Germany (6). In all patients, previous and current pharmacological and psychotherapeutic (including dialectic behavioral therapy) treatment attempts had been insufficient and treatment with BTX has been offered as compassionate use. Two to 6 weeks following the injection of BTX, the symptoms of BPD as measured by the Zanarini borderline personality disorder rating scale and/or the Borderline Symptom List improved by about 50–90% from baseline values. Patients also depicted a reduction in impulsivity, self-harming behavior, agitation, and concomitant depressive symptoms as well as an improvement in social functioning. About half of patients sought repetition of the treatment months later, which led to a replication of the clinical improvement. In this case series, we report our clinical experience with the use of glabellar injection of BTX as an off-label treatment option for symptoms of BPD. With regard to the facial feedback theory mentioned above, BTX may diminish the entire spectrum of negative emotions and thereby calm down the pathognomonic emotional instability of BPD. Consequently, BTX may also help to control impulsivity derived from overwhelming affect and also correct the negative bias in facial emotion recognition characterized by hyperreactivity of the amygdala (7–9). Given the limitations and confounding factors associated with a preliminary casuistic study like this, these findings are currently under investigation within a randomized clinical trial (NCT02728778).

No. 105

Weight Gain in an Acute Inpateint Setting

Poster Presenter: Gwen A. Levitt, D.O.

SUMMARY:

The impact of weight gain is a common problem facing all patients, especially the seriously mentally ill population. There are interventions to mitigate weight gain in this population, however most focus on outpatient settings. This study was undertaken to quantify weight gain in an inpatient setting and assessed whether instituted interventions to reduce weight gain were effective. A retrospective study analyzed weight changes in adult psychiatric inpatients with lengths of stay of 30 days. Data regarding weight changes were collected from medical records of patients before hospital-wide policy changes to combat weight gain and after the changes were instituted. A total of 537 charts were reviewed. Male inpatients gained an average of 7.61 pounds and females gained 6.02 pounds. The average weight change increased for the pre-policy and post-policy change periods, 6.08 pounds and 7.85 pounds, respectively; a 29% increase in average weight. This study demonstrates that weight in psychiatric inpatients hospitalized for 30 days or longer increased, despite widespread changes in the hospital setting implemented to limit weight gain.

No. 106

Do Periodic Physical Exercises Improve the Psychological Moods for Highly Sensitive Persons?

Poster Presenter: Kosuke Yano

Co-Authors: Shintaro Endo, Kurara Bannai, Kazuo Oishi

SUMMARY:

Background: Highly Sensitive Person (HSP) deeply processes and has greater responsivity to environmental stimuli. HSP has been suggested to have higher risks for depression. Former studies have shown that the improvement of psychological states after acute physical exercise could generally reduce the risk of depression. However, fewer studies have examined the effects of acute physical exercise for HSPs. This study aimed to investigate the changes of psychological states after acute exercise for HSPs comparing with non-HSPs. Methods: The participants were 38 Japanese university students (mean age: 18.7±1.6 years; male: 47.8%). A total of 10 exercise sessions (table tennis; 60 min each session) was conducted intermittently at a weekly pace. Before the initiation of the sessions, they completed the Japanese version of 19-item Highly Sensitive Person Scale (Takahashi, 2016). Then, those who were in the top of 25% on the scale were defined as HSPs (n = 11) and the others were as non-HSPs (n = 27). They also responded the Two-Dimensional Mood Scale (TDMS; Sakairi et al., 2013) evaluating psychological states with two dimensions, i.e., pleasure and arousal. This scale was completed before and after each session. Results: The mean scores of pleasure and arousal before and after each session were calculated respectively. The results of two-way mixed ANOVA did not show significant interactive effects. Paired t-tests for the mean scores showed the significant increases of pleasure in the both groups (HSPs: $t = 3.30$, $p < .01$, Cohen's $d = 1.03$; non-HSPs: $t = 5.14$, $p < .01$, Cohen's $d = .82$). However, no significant changes of arousal were shown in the both groups. Additionally, Welch's t-tests were conducted with the pleasure scores before and after exercise and the amount of the changes as dependent variables and groups as independent variable. The results showed that the larger amount of the change was obtained for the HSP group ($t = 0.20$, $p < .01$, Cohen's $d = .07$), though the higher scores were obtained for the non-HSP group both before and after exercises (before: $t = 1.28$, $p < .01$, Cohen's $d = .42$; after: $t = 0.93$, $p < .01$, Cohen's $d = .31$). As for the arousal scores, the non-HSP group showed higher scores (before: $t = 0.80$, $p < .01$, Cohen's $d = .29$; after: $t = 0.99$, $p < .01$, Cohen's $d = .33$; amount of change: $t = 0.14$, $p < .01$, Cohen's $d = .05$). Conclusion: This study showed the possibility that acute physical exercise could improve mental health of HSPs.

No. 107

CYP Polymorphisms in a Psychiatric Clinical Population

Poster Presenter: Nichole Rigby

SUMMARY:

BACKGROUND: Cytochrome P450 (CYP) enzymes play an important role in the metabolism of numerous medications, notably a majority of psychotropics. Common variations in CYP genes affect the function of these enzymes, which may influence medication toxicity and efficacy. The extent to which such variations impact real-world, clinical populations, however, has not been established, particularly for individuals not of Northern European ancestry. METHODS: We compared the prevalence of CYP metabolic phenotypes of a sample of mental health patients undergoing commercially available pharmacogenetic (PGx) testing (Genecept) to the prevalence observed in reference populations. Specifically, we examined 21,812 patients who self-identified as Caucasian, African-American or Hispanic. Metabolizer phenotype was derived from the genotypes of CYP1A2, CYP3A4, CYP2B6, CYP2C19, CYP2C9, and CYP2D6 for mental health patients tested by the assay, and compared to that of healthy individuals utilizing data obtained from the 1000 Genomes Projects. Patient-reported ethnicities for the mental health cohort were used to make population-specific comparisons. CYP genes that were significantly different in phenotype frequency within specific ethnicities were identified and chosen for further examination. RESULTS: Our study reveals several ethnicity-specific differences in CYP phenotype frequency compared to the global population. Specifically for CYP3A4, Caucasian psychiatric patients had a significantly higher proportion of non-normal metabolizers compared to the reference population (Fisher Exact Test; p-value=0.0265), while African-American patients had a significantly higher proportion of normal metabolizers (Fisher Exact Test; p-value=0.0065). Additionally, the Hispanic mental health patients had a significantly greater number of CYP2C9 intermediate metabolizers than the reference population (Fisher Exact Test; p-

value=0.0050). There was no association, however, between psychiatric diagnosis and CYP2C9 phenotype in the Hispanic group. We observed no significant differences in phenotype frequencies between populations for CYP1A2, CYP2B6, CYP2C19, or CYP2D6. DISCUSSION: We have identified significant differences in CYP metabolism phenotype frequency within specific ethnic populations between mental health patients and healthy individuals. Our results suggest that Caucasian psychiatric patients undergoing PGx testing are more likely to have non-normal metabolism for the CYP3A4 enzyme than their healthy counterparts. This differs in the African-American psychiatric population, for whom we note significantly more normal metabolizers in the PGx cohort. We also observe that Hispanic psychiatric patients undergoing PGx are more likely to exhibit intermediate metabolism for CYP2C9. These results indicate wide variation in CYP metabolism among clinical populations.

No. 108

A Novel Gene-Drug Interaction Guide (GDIG) for Computer-Assisted Polypharmacy Decisions in Psychiatry

Poster Presenter: David Krause
Lead Author: Evgeny Krynetskiy
Co-Author: Daniel Dowd

SUMMARY:

BACKGROUND: In the U.S, about 60% of adults aged 45 and older use ≥ 5 drugs. Drug-drug interactions, side effects, and environmental interactions are important risk factors in polypharmacy that must be considered in standard drug decision-support tools. The efficacy, exposure, and tolerability of many pharmaceuticals are modulated by drug-metabolizing enzymes, especially the CYP450 system. In 2017, prescribing information (PI) of ≥ 190 U.S. licensed drugs, including ≥ 25 psychotropic drugs, contain precautions or warnings with respect to specific pharmacogenetic (PGx) interactions, suggesting the need for tools that integrate drug-drug-gene interactions. OBJECTIVE: To create a practical digital drug-drug-gene interaction machine for use at the point of care. METHODS: We systematically reviewed information on drug metabolism from multiple publicly available databases, including FDA PIs, the Flockhart tables, PharmGKB, and PubMed searches. These data were utilized to design an algorithm in a custom-designed SQL database. 45 functional SNPs were tested in 6 highly polymorphic CYP450 genes. Patient genotypes, along with demographic data, and consuming habits (smoking, caffeine) were used as input. The algorithm measures and scores the submitted data against the clinical information in the database, and returns results to the user interface. Readily interpretable icons, including warnings, help to assess the results. Discrepancies in the databases were resolved using manual-curated consensus of experts based upon best interpretation of the literature and scientific information. The output of the tool was prediction of a drug-metabolizing phenotype, and drug-drug-gene interactions expressed as no effect/ low risk/moderate risk/high risk, consistent with FDA definitions. RESULTS: An interactive GDIG tool was created to predict PGx gene-drug-drug interactions, including the impact of several exogenous factors (smoking, caffeine). The algorithm incorporates interactions of 45 SNPs in six CYP450 genes (1A2, 2B6, 2C9, 2C19, 2D6 [plus 3 CNVs of 2D6], CYP3A4/5), 235 pharmaceuticals including more than 120 commonly used psychiatric drugs, totaling 935 drug terms (generic/ trade names). The results of the analysis agreed with expert evaluations of the genotype-phenotype output in the validation cohort. DISCUSSION: We developed a practi

No. 109

Trends of Polypharmacy and Prescription Patterns of Antidepressants in Asia

Poster Presenter: Cho-Yin Huang, M.D.
Lead Author: Lian-Yu Chen, M.D., Ph.D.
Co-Authors: Ramin Mojtabai, M.D., Ph.D., M.P.H., Norman Sartorius, M.D., D.P.M., Ph.D., M.A., Naotaka Shinfuku, M.D., Ph.D.

SUMMARY:

Aim: Little is known regarding the prescription pattern of antidepressants (AD) and trends of polypharmacy in Asia. Thus, we used data from five Asian countries to examine the patterns of AD prescription and the trend of polypharmacy over time. Methods: We used the cross-sectional, pharmaco-epidemiologic study from 2004 and 2013

REAP-AD (Research on Asian Psychotropic Prescription Patterns for Antidepressants) to examine the patterns of AD prescriptions across 5 Asian countries including China, Japan, Korea, Singapore, and Taiwan. We compared the trend of polypharmacy (i.e. concomitant use of 2 or more classes of psychotropics) among individuals receiving AD prescriptions from 2004 to 2013 using multivariate logistic regression models. We further conducted the analyses by different diagnostic categories. Results: We found a general trend of increasing prescription of newer ADs across 5 countries. Factors associated with newer ADs prescriptions are being in private institutions, in year 2013 and in countries other than Japan. Combination use of older and newer ADs significantly decreased in China, Japan and Korea. Surprisingly, the proportion of psychotropic polypharmacy decreased from 2004 to 2013 across three diagnostic categories, including mood disorders (Adjusted OR = 0.44 [0.35-0.56]; p<0.001), anxiety disorders (aOR= 0.58[0.36-0.94]; p=0.028) and psychotic disorders (aOR= 0.18[0.05-0.60]; p=0.006). Among individuals with AD prescriptions, concomitant use of anxiolytics decreased in patients with mood disorders (aOR = 0.34 [0.27-0.42]; p<0.001) and anxiety disorders (aOR= 0.43[0.27-0.67]; p<0.001). In contrast, increased antipsychotics prescription in those with mood disorders (aOR = 1.43[1.15-1.77]; p=0.001) and increased mood stabilizers prescription in psychotic disorders (aOR= 3.49[1.50-8.14]; p=0.004) were observed. Conclusion: This is the first study examining trends in psychotropic polypharmacy in East Asia. We found a generally decreasing trend of psychotropic polypharmacy in contrast to the increasing trend reported from western countries. These findings could offer implications for health system reform or policy making.

No. 110

Combinatorial Pharmacogenomics Significantly Improves Response and Remission for Major Depressive Disorder: A Double-Blind, Randomized Control Trial

Poster Presenter: John Francis Greden, M.D.

SUMMARY:

Background: Major depressive disorder (MDD) is a leading cause of disease burden worldwide, with a lifetime prevalence in the United States of 17%. Here we present the results of the first prospective, large-scale, double-blind, randomized controlled trial evaluating combinatorial pharmacogenomic (PGx) testing compared to treatment as usual (TAU) in medication selection for treatment-resistant MDD. Methods: 1,167 outpatients diagnosed with MDD who had an inadequate response to ≥1 psychotropic medication were enrolled and randomized 1:1 to the TAU arm or the arm guided by a combinatorial PGx test (guided-treatment arm). Combinatorial PGx testing categorized medications into three categories: use as directed, moderate gene-drug interactions, or significant gene-drug interactions. Patients were evaluated for efficacy, safety and tolerability at weeks 0 (baseline), 4, 8, 12 and 24. Patients, site raters, and central raters were blinded in both arms until week 8 and were unblinded at week 12. In the guided-treatment arm, physicians had access to the combinatorial PGx test result to guide medication selection. In both arms, patients were blinded to whether the PGx test result was incorporated in treatment decisions. Primary outcomes utilized the Hamilton Depression Rating Scale (HAM-D17) and included symptom improvement (percent change in HAM-D17 from baseline), response (50% decrease in HAM-D17 from baseline), and remission (HAM-D17 <7) at the fully blinded week 8 time point. HAM-D17 assessments were performed by a blinded central rater. The durability of patient outcomes was assessed at week 24. Patient medications were categorized as being congruent with the PGx test result (no/moderate gene-drug interactions) or incongruent (significant gene-drug interactions). Results: At week 8, individuals in the PGx Intervention group, compared to those in the TAU group, were more likely to achieve remission (15% versus 10%; p<0.01) and response (26% versus 20%; p=0.01). Average percent reduction in HAM-D17 score at week 8 trended towards significance in the direction of the guided-treatment arm (p=0.11). Patients taking incongruent medications at baseline who were changed to congruent medications demonstrated significantly better remission (p<0.01), response (p=0.04), and symptom improvement (p<0.01) compared to those continuing on incongruent medications. Remission rates, response rates, and symptom reductions

continued to improve in the guided-treatment arm until the 24-week time point. Conclusions: Achieving response and remission are fundamental goals of treating patients with mental illness. Results from this large-scale, randomized controlled trial demonstrate the clinically significant utility of this combinatorial PGx test in improving short- and long-term response and remission rates in depressed adults compared to clinicians' usual approaches to medication selection.

No. 111

Lurasidone: Fulminant Hepatic Failure (FHF)

Poster Presenter: Je Deuk Ko, M.D.
Co-Author: Sohail Amar Nibras, M.D.

SUMMARY:

Ms.A is a 16-year-old female patient diagnosed with Bipolar Disorder Type I, was seen by her community psychiatrist for worsening of her depression. After the failed trial of escitalopram 20 mg and aripiprazole 10 mg the psychiatrist tapered and stopped them. He started lurasidone 20 mg in the night for depressive episodes. After taking the single dose of lurasidone 20 mg in the night; she woke up with abdominal pain, nausea, and fatigue. She was taken to the emergency due to excessive fatigue and blood work was done. It was noted that her the liver enzyme levels increased tenfold (ALT-3627and AST-2320) after a single dose of lurasidone 20 mg. Due to a possibility for decompensation, she admitted to the pediatric intensive care unit for further management. The patient was not on a concomitant medication, ANA, anti-LKM, AMA, SMA, pANCA and serology for viral hepatitis and HIV were negative and her abdominal ultrasonography and magnetic resonance imaging was normal, no medical disease could be detected to explain hepatotoxicity. Additionally, enzyme levels rapidly returned to the normal range when lurasidone treatment was discontinued. Although idiopathic hepatitis can also be a possible explanation for the liver enzyme elevations, normalization of enzyme levels to baseline levels following lurasidone discontinuation supported the probability of hepatotoxic drug reaction. We did Naranjo Adverse Drug Reaction Probability Scale which gave us a score of 7 suggesting the hepatic toxicity is probably due to the drug rather than the result of other factors. We believe that this is the first case report of clinical and/or biological hepatic toxicity on lurasidone. Asymptomatic elevation of liver enzymes has been observed in up to 50% of patients treated with atypical antipsychotics however serious hepatotoxicity with these agents has been rarely reported (Hummer et al., 1997; Szigethy et al., 1999; Kumra et al., 1997). Asymptomatic increase in hepatic enzymes has been reported with atypical antipsychotics, namely clozapine, olanzapine, amisulpiride, risperidone, and quetiapine (Gaertner et al., 2001; Mouradian-Stamatiadis et al., 2002). The exact mechanism of lurasidone hepatotoxicity is not known but it could be due to the drug itself, its metabolite or hypersensitivity/ immunoallergic reaction. Clinicians should be aware of possible hepatotoxic effects of lurasidone when starting it and should monitor the liver enzyme levels whenever they feel necessary. Since current data is insufficient, based on reports of serious hepatotoxicity, controlled and longitudinal research are needed to clarify the side effects of lurasidone on the liver.

No. 112

The Role of Antipsychotics in Dopamine Supersensitivity Psychosis

Poster Presenter: Henrique Medeiros
Co-Author: Raquel Serrano

SUMMARY:

Background: Antipsychotics with affinity for dopamine D2 receptors remain the mainstay of treatment for schizophrenia and other forms of psychosis. In the literature it is referred that antipsychotics may induce dopamine supersensitivity psychosis (DSP), which is characterized by rebound psychosis, drug tolerance, and tardive dyskinesia and it may be related to the etiology of treatment-resistant schizophrenia. The authors aim to do a systematic review about the role of antipsychotics in dopamine supersensitivity psychosis. Methods: Systematic review through literature research in MedLine, Pubmed, PsycInfo, and Cochrane using the keywords dopamine supersensitivity psychosis, antipsychotics, induced psychosis and the boolean operator AND, followed by the application of database-specific filters and eligibility criteria. Results: There is evidence to

suggest that long-term antipsychotic treatment may contribute to DSP, since prolonged blockade of D2-receptors has been shown to induce both upregulation and conversion to high affinity states, generating a receptor supersensitivity. There is indirect evidence that this may be responsible for the reduction in efficacy of antipsychotics with their chronic prescription. Although the direct mechanism of action is uncertain, chronic antipsychotic treatment seem to be correlated with changes in the dopaminergic signaling pathways, targeting key regulatory proteins. Even though many studies support the concept of antipsychotic induced DSP, the characterization of DSP may lie a problem, since there is still a debate to what criteria should be included. Conclusion: RCTs are needed to evaluate how can antipsychotics be safely reduced over time to examine the risk of relapse and to avoid increases in D2 receptor number and agonist affinity, which in turn can lead to supersensitivity psychosis, rebound psychosis, withdrawal psychosis, and drug resistance. The understanding of the phenomenon of DSP and its prevention may significantly affect patient outcomes.

No. 113

Functional Characterization of FDA-Approved Atypical Antipsychotics at Human Neurotransmitter Receptors and the Implication for Their Clinical Profile

Poster Presenter: Jesse Carlin
Co-Authors: Changfu Xiao, Mihael Polymeropoulos

SUMMARY:
Background: Second generation antipsychotics bind dopamine D2 and serotonin 5-HT2 receptors which is thought to improve their benefit risk profiles, especially with extrapyramidal symptoms (EPS). Second generation antipsychotics also bind to a large number of other neurotransmitter receptors in different strengths and combinations. Methods: We have examined the binding profile of iloperidone alongside other approved second generation antipsychotics and calculated the 5-HT2/D2 ratio of the negative log of the Ki (pKi) value. We discuss the differences in binding affinities in the context of their clinical and side effect profiles. Conclusions: Iloperidone has high (nM) affinity for serotonin 5HT2A, dopamine D2 and D3 receptors in humans and thus acts as an antagonist at selected dopaminergic, serotoninergic, and adrenergic receptors. Iloperidone's binding affinity at human neurotransmitter receptors including dopamine D1, D2, D3 receptors, serotonin 5-HT1A, 5-HT2A, 5-HT2C receptors, adrenergic ?1a, ?1b receptors, histamine H1 receptors, muscarinic receptors, and nicotinic receptors, differs from other approved antipsychotics. We have made preliminary conclusions on the association of the binding profiles with clinical expression including weight gain, somnolence, akathisia, EPS, and orthostatic hypotension. For example, the individual neurochemical profile of iloperidone predicts that it would be comparable with ziprasidone and risperidone in its antipsychotic efficacy but may cause less akathisia, extrapyramidal side effects (EPS) and activation.

No. 114
WITHDRAWN

No. 115

Efficacy of Atypical Antipsychotics in the Treatment of Bipolar Depression: A Systematic Review and Meta-Analysis

Poster Presenter: Katsuhiko Hagi

SUMMARY:
Aims: The aim of this systematic review and meta-analysis was to compare the clinical benefits of atypical antipsychotics (AAPs) during the acute treatment of patients with bipolar depression. Methods: We conducted systematic review and meta-analysis of randomized, placebo-controlled trials (RCTs) assessing the efficacy of AAPs in acute bipolar depression to compare clinical benefits. Clinical benefit outcomes included depressive symptom improvement using the Montgomery-Åsberg Depression Rating Scale (MADRS), global improvement using the Clinical Global Impressions scale for use in bipolar illness (CGI-BP), and treatment response and remission. Results: We identified 22 RCTs (n=8,823) testing 7 different AAPs vs. placebo Five of these AAPs, namely cariprazine, lurasidone, olanzapine, olanzapine+fluoxetine and quetiapine, demonstrated significant improvement in MADRS total scores (effect sizes=0.27-0.58) and the CGI-BP (effect sizes=0.25-0.53). These AAPs had

significantly higher response rates compared with placebo (risk ratio=1.30-1.84), translating into single digit NNTs. These AAPs had significantly higher remission rate compared with placebo, and lurasidone, olanzapine+fluoxetine and quetiapine had single digit numbers-needed-to-treat (NNTs=4-9). Conversely, aripiprazole and ziprasidone, were not significantly different from placebo in depressive symptom improvement, treatment response, nor remission. Conclusions: Results from this meta-analysis suggest that there are some significant differences in terms of symptoms improvement, treatment response and remission rates among AAPs in the treatment of bipolar depression. These data need to be integrated with adverse effect profiles of specific AAPs and individual patient characteristics (e.g., clinical urgency and adverse effect sensitivity) to optimize the management of acute bipolar depression.

No. 116

Costs and Factors Associated With Psychiatric Hospital Readmission in Employees Treated in Social Security

Poster Presenter: Julia Elena Cañedo Reyes
Co-Authors: Felipe Vazquez, Javier Valencia

SUMMARY:

Background: Hospital readmissions (HR) are frequent preventable events, with a high economic impact for the health system, the patient and families. In psychiatry, because of the natural evolution of the disease, this is a common event. There are associated factors related to hospital readmission (AFRHR) and these can be related with the patient (PRF) or related with hospital attention (HARF). Objective: Estimate direct (DMC) and indirect (IMC) medical costs and determine the associated factors with hospital readmission in employees treated in the "Instituto Mexicano del Seguro Social (IMSS)" psychiatric hospital. Methodology: Observational, analytic study. Sample: IMSS beneficiaries employees that were admitted to the psychiatric hospital during 2014. Follow up: one year after discharge of index admission in 2014. Data source: medical records. Analysis: We performed a descriptive analysis of the HR in the study sample. A bivariated analysis identified the most relevant factors associated with HR. We estimated the DMC and IMC for productivity loss associated with HR from the perspective of the IMSS (as insurer and service provider). Results: Of 158 patients that were admitted, 25 patients (15.8%) had at least one HR. The PRF with more risk of HR were: Christian religion, 5 or more previous psychiatric admissions, exacerbation of existing psychiatric disorder as reason for admission, having between 10 and 15 years of evolution of diagnosis at admission, discharge diagnosis of bipolar disorder and schizophrenia. The HARF with more risk of HR were: more than 22 days of hospital stay, 5 or more prescribed drugs at discharge. The average DMC represents 98% of total cost, including the admission index and the HR. Those patients who did not have HR, the average DMC per patient was of 12,036 US dollars (247,683 Mexican pesos). The average subsidiary import per patient was of 104.42 US dollars (1,984 Mexican pesos) in those patients without HR and of 300 US dollars (5,710 Mexican pesos) in those patients with HR. Conclusion: The HARF in the working class population were similar to those reported in the general population, none the less the percentage of readmissions obtained in our research were less than those found in the majority of related research in this subject. The average DMC per patient with HR is three times more than that of a patient without readmission. The average subsidiary import per patient with HR is 2.8 times the average indirect cost of a patient without readmissions.

No. 117

Unwelcome and Unwanted: The Struggle of American Muslims in 2018

Poster Presenter: Balkozar Seif Eldin Adam, M.D.
Co-Authors: Balkozar Seif Eldin Adam, M.D., Farha Zaman Abbasi, M.D., Rania Awaad, M.D., Fatten Elkomy

SUMMARY:

Muslims in America are currently under unprecedented stress. With the current political climate, a spike in hate crimes and the proposed travel ban on individuals from six predominately Muslim countries, they feel unwelcome and unwanted. Many have expressed a fear for their safety and an attack on their identity and faith. They have described feeling like the country they call

home has rejected them. The tragic events in Charlottesville, VA in August 2017 only compounded feelings of alienation and increased the levels of toxic stress they are experiencing. The heightened stress puts them at risk for cognitive impairment and stress-related disease. An exposure to microaggressions -- even by clinicians -- can breed resentment and damage the professional relationship. The poster presenters have worked closely with Muslim patients and their families and are familiar with Islamic and cultural practices. They have provided culturally sensitive care while identifying and treating depression, anxiety, and other mental health disorders. Results: Continued terrorist attacks perpetrated by those who self-identify as Muslims and increased Islamophobia has left many Muslims patients in need of mental health care. The stigma of mental illness acts as a barrier that has kept many Muslim patients from obtaining that care. In addition, some Muslims are reticent to seek help if that treatment does not conform to their beliefs. Historically, a significant segment of the population has expressed a preference for faith healers who will not pathologize their illness and instead refer to scripture to address their suffering. However, such religious healers or Imams need the appropriate training to identify mental illnesses in their congregations and to be educated on how to collaborate with mental health providers. Muslims also struggle with microaggressions, covert forms of brief, common discriminatory acts that can be verbal, behavioral, visual or environmental. They can occur daily, whether intentional or unintentional, against a person or group, and based on religious, ethnic, or gender affiliations. Findings: Significant research demonstrates that Muslims tend to be more reluctant to seek mental health treatment. To provide the best treatment and care, clinicians need to understand the cultural and religious backgrounds of Muslims. Many Muslims are under increased stress following the major shift in the political climate. Many mental health providers have not been able to keep up with the rapidly changing developments. Conclusion: Given the current situation of Muslims in America, it is imperative that, as clinicians, we are aware of the significant challenges faced by this subset of the population so we can better serve the Muslim patients.

No. 118

Pediatric Dissociative Reaction With Delusions of Persecution, Punishment, and Demons: A Psychosomatic Manifestation of Extreme Guilt

Poster Presenter: Julia Gwen Ridgeway-Diaz, M.D., M.S.

Co-Authors: Adam Goldberg, M.D., Laurel Williams, D.O.

SUMMARY:

Mr. B is a 13-year old East African male with no past psychiatric history who presented to the psychiatric consult service with acute onset altered mental status, bizarre behavior, hyper-religiosity, and aggression. The patient had suddenly developed the delusion that he was in hell, and that all who surrounded him, including his family and the healthcare providers, were demons. His bizarre behavior included speaking with a different voice, and recoiling, screaming, and arching his back when prayed over by his family. His family reported that this abrupt change in his behavior occurred after he returned from an outing with friends, where he said he ingested an unknown recreational drug. He was admitted to the Pediatric Hospital Medicine service. The medical team considered the differential diagnosis of drug intoxication, viral encephalitis, acute trauma reaction, and primary psychotic disorder [1]. His family—East-African immigrants—believed his behavior could possibly be due to possession by a demon, a belief consistent with their cultural and religious framework [2]. The patient received an extensive medical work up that excluded infectious and neurologic etiologies, including urine and serum drug screening. His family cooperated with the medical and psychiatric treatments offered, but they also performed spiritual interventions while the patient was in the hospital, including prayer, the use of holy water, and consultation with a priest trained in performing exorcisms. This led to tension between the family and the interdisciplinary medical team. The patient was treated with antipsychotic medication, with improvement in his aggressive behavior, and though he persisted in his delusional beliefs, they became less distressing. Interestingly, the patient and his family attributed his improvement at least in part to a spiritual healing, which they felt was necessary in order to lift the

extreme guilt he carried over past "sins." In formulating this case, the psychiatric team concluded that the patient's delusions and behavior were possibly symptoms of a dissociative reaction resulting from extreme guilt. This reaction resolved when the patient believed he had sufficiently atoned for his past wrongdoings and been forgiven by God [3]. In this poster, we discuss the unique challenges of working with patients with explanatory models of disease that differ from those of Western medicine, and the opportunity that these cases present to expand one's repertoire of rapport building and treatment strategies.

No. 119

A Targeted Approach to Building Resiliency and Well-Being Among Neurology and Family Medicine Residents

Poster Presenter: Alyse Stolting, M.D.
Co-Authors: Amy Reise, Julie Brennan, Jennifer Tripi, Archit Sahai, Emily Sudhakar, Angele McGrady

SUMMARY:
Medical residency is a high stress period characterized by long hours, increased responsibilities, lack of control, and fatigue. These factors correlate with high distress and burnout which tend to increase medical errors, absenteeism, as well as elevate the risk for mood and anxiety disorders(1,2). It is well documented that burnout is experienced by many medical residents in a wide variety of specialties (3), but there is a paucity of data about resiliency program creation. Developing a specialty-specific resiliency program may be a promising intervention to help ameliorate the negative outcomes experienced by medical residents. This project was reviewed by IRB and all participants signed a consent form. A total of 10 neurology residents, 8 men and 2 women, participated in our specialty-specific resiliency program. The average age of participants was 29. A total of 32 Family Medicine residents participated as well, which included 10 family medicine residents as controls. The average age of participants was 33. At the start of both programs participants completed a needs assessment, which asked residents to identify topics they felt would be most beneficial to learn about during the year. This, in turn, allowed us to tailor our efforts. Residents in the neurology program identified balancing life, managing anxiety and time management as areas of need. Residents in the family medicine program identified stress management, time management and relaxation skills as areas of focus. As a result of the assessments, we developed a curriculum that consisted of 8 one hour long sessions throughout the academic year that targeted these areas. Specifically, we taught residents the techniques of, slow breathing, mindfulness, coping skills, relaxation, imagery and balancing life. At the conclusion of our program, a post test of family medicine residents showed a statistically significant improvement in emotional exhaustion ($p = 0.01$) and an improvement in their depersonalization/compassion score ($p=0.013$) (ANOVA). Although there were no significant changes in the relevant variables among neurology residents (paired t-tests), feedback from the neurology service was positive. There were differences between the two groups including stronger faculty support from the family medicine program compared to the neurology program. One of the limitations of the study was inconsistency in resident attendance due to clinical responsibilities. These data suggest that the development of a specialty-specific program can improve the emotional wellbeing of residents.

No. 120

"Will You Be My Facebook Friend?" Professional Identity Tensions and Boundary Issues in the Age of Social Media: A Workshop for Psychiatry Residents

Poster Presenter: Albert Ning Zhou, M.D.
Co-Author: Erick Kwan Jo Hung, M.D.

SUMMARY:
Background: Social media use causes unique tensions for medical professionals, as it can blur the boundary between personal and professional lives. Many psychiatry residents are "digital natives" who have grown up using social media, and they continue to use social media as they progress through residency and form their professional identity. Currently, the psychiatry residents at the University of California, San Francisco (UCSF) receive no formal teaching on how to navigate social media and the professional identity tensions and boundary issues that may arise because of its use. A mixed-strategy educational workshop was developed by the authors

(the chief resident for education and the program director) to address this need. Methods: Kern's 6-step framework was used to develop this workshop. A needs assessment was conducted through informal focus groups with residents and faculty. Results from the needs assessment guided the design of a 90-minute mixed-strategy workshop targeting residents from all four years of training on professionalism issues and boundary considerations in social media use. The website pollev.com was used to provide real-time audience feedback and administer pre- and post-surveys to evaluate comfort level in discussing challenges and boundary issues in using social media. Results: Twenty-nine residents attended the session with the following breakdown by level of training: PGY1: 4 (14%), PGY2: 9 (31%), PGY3: 5 (17%), PGY4: 11 (38%). Thirteen (45%) residents completed the pre- and post-surveys. Before the session, 46% of residents reported feeling comfortable or somewhat comfortable discussing the challenges social media may create in their professional careers, which changed to 92% after the session. Similarly, in the pre- survey 38% of residents reported feeling comfortable discussing boundary issues with regards to social media," while 100% of residents somewhat/strongly agreed in the post-survey. The top concern about using social media was "privacy." All residents reported using privacy settings on their social media and 47% of residents were social media friends with attendings. Only 7% of residents received a friend request from patients on social media but 83% of residents had looked up a patient online or on social media. Fifty four percent of residents somewhat agreed or strongly agreed that they will change their social media use in response to this didactic. Conclusions: A mixed-strategy workshop on social media can increase psychiatry residents' comfort level in considering professionalism and boundary issues that arise online and help residents navigate the complex world of social media in their professional careers.

No. 121

Teaching Structural Competency Through a Sociology Elective in Medical School

Poster Presenter: Gregory Gabrellas, M.D., M.A.

SUMMARY:

Medical schools increasingly recognize the need to incorporate perspectives from the social sciences into general medical education to prepare students and residents to confront the emerging systemic issues facing doctors and patients alike. However, barriers in the structure of physician training, such as limited time to cover vast domains of biological, social, and psychological knowledge, have long presented difficulties in terms of how social science should be taught. Metzl and Hansen (2014) propose structural competency as an approach to capturing those elements of social medicine that are relevant to physicians and can be generalized to a medical curriculum. Structural competency refers to the ability to recognize how "social structures shape clinical interactions," which implies some understanding of social theory apart from biological or psychological explanations of human behavior, as well as familiarity with "structural interventions" that seek to change the social conditions that deleteriously affect patient care. Although various curriculum initiatives have begun to use this or related frames, structural competency remains under-utilized to help physicians-in-training understand and possibly improve the social conditions of health care. A novel elective course in the medical humanities was developed by adopting the structural competency model to synthesize and present social issues in medicine in a way that is relevant and accessible to first and second year medical students. The course was designed to develop students' "sociological imagination," which is the capacity to connect the personal troubles faced by doctors and patients respectively with the social and political issues that are the material of sociology, social movements, and public policy. The course was a ten-hour seminar broken into five sessions on the following topics: introducing the sociological imagination, the drug companies and pharmaceutical living, health care reform and American politics, psychosocial dimensions of medical training, and winners and losers in the business of health care. These themes were chosen to highlight the major structures physicians will find themselves caught within that may cause feelings of powerlessness and burnout: e.g., the pharmaceutical and hospital industries, national health care policy, managed care, and the organization of medical training itself. The purpose of this poster is to

describe the course and to demonstrate that it satisfies the objectives of structural competency while stimulating the interest and participation of medical students. Seventeen students met the requirements to complete the course and submitted anonymous surveys. Survey questions assessed how effective the course was at addressing dimensions of structural competency. Students rated the course effective at helping them: understand social theories and their relevance to health, disease, and the organization health care services, conceptualize patient cases by drawing on the social sciences, and recognize the importance of structural interventions, in history and today. We assessed the beliefs of students who took the course regarding salient aspects of medical education that similar courses such as this can improve, and found evidence that the course being taught and facilitated by peers is helpful to their learning.

No. 122

Cefazolin-Induced Encephalopathy in Hemodialysis-Dependent ESRD: A Case Report

Poster Presenter: Kartik Narayana Sreepada, M.D., M.P.H.

SUMMARY:

Introduction: While there have been many case reports of cefepime-induced encephalopathy in hemodialysis patients, cefazolin has not been widely associated with this condition. We report an unusual case of a 81-year-old patient with ESRD developing suspected cefazolin-induced encephalopathy with complete resolution with hemodialysis. Case Report: A 81-year-old Korean-speaking female with ESRD on hemodialysis, hypertension, atrial fibrillation on apixaban, type 2 diabetes, and endometrial cancer status post hysterectomy was brought in by her family with altered mental status with one-day duration. The patient had been hospitalized one week prior for Streptococcus intermedius bacteremia sensitive to cephalosporins, vancomycin, and linezolid only. The patient was discharged on a 6-week course of renally-dosed cefazolin given post-hemodialysis (2g Monday, 2g Wednesday, 3g Friday). The patient had malaise for the week prior to hospitalization. The patient's mental status promptly regressed as she was making purposeless movements, unable to recognize her family members, and screaming for her mother in Korean. The patient was then brought to the hospital. On initial presentation, the patient was lethargic with response to verbal stimuli but unable to follow commands using translator phone. Systolic blood pressure was in the 160s but vitals were otherwise within normal limits. Labs were largely unremarkable with blood urea nitrogen 28 mg/dL, glucose 140 mg/dL, white blood cell count 6.9 x 10^9/L, ammonia 26 umol/L. Lumbar puncture showed clear, colorless fluid with a total nucleated cell count of 1 and negative for bacterial meningitis. Blood, urine, and CSF cultures were negative. Fungal, acid fast, and CSF PCR panel were negative. CT head was negative for acute intracranial process. The patient was given IV lorazepam and haloperidol, however the patient remained agitated overnight. The patient underwent urgent dialysis. The following afternoon, the patient had impressively rebounded to her fully alert and oriented baseline. An EEG demonstrated generalized delta and theta waves consistent with metabolic encephalopathy. Due to the resolution of symptoms after hemodialysis, cefazolin-associated encephalitis was suspected. Discussion: While there have been many case reports of cefepime-induced encephalopathy in hemodialysis patients, this is one of the first reported cases of cefazolin-induced encephalopathy. A chart review of prior cases demonstrated seizure-like activity after significantly higher doses of IV cefazolin were administered with resolution after reduction of the dose. Hypothesized mechanisms include competitive inhibition of GABA receptors, , reducing neuronal threshold, inhibition of neurotransmitters resulting in reduced Cl- conductance, and increased extracellular [K+] via Na+/K+ pump dysfunction. This case demonstrates the importance of monitoring mental status in ESRD patients treated with cephalosporins.

No. 123

Potential Relationship Between Relapse and Plasma Drug Levels Following Discontinuation of Cariprazine Treatment in Patients With Schizophrenia

Poster Presenter: Christoph U. Correll, M.D.
Co-Authors: Rakesh Jain, Antonia Periclou, T. J. Carrothers, Laishun Chen, Mehul Patel, Willie Earley, Ágota Barabássy, Judit Harsányi, Irma Saliu

SUMMARY:
Background: Cariprazine (CAR), an oral dopamine D3-preferring D3/D2 receptor partial agonist and serotonin 5-HT1A receptor partial agonist, is approved for the treatment of adults with schizophrenia in the US and Europe. CAR forms 2 major metabolites, desmethyl cariprazine (DCAR) and didesmethyl cariprazine (DDCAR), which are pharmacologically equipotent to CAR; the half-lives are 2-4 days for CAR, about 1-2 days for DCAR, and approximately 1-3 weeks for DDCAR. Oral atypical antipsychotics (AAPs) with long half-lives may confer continued effects after stopping treatment. Here, we explored the timing of relapse following drug discontinuation and its relationship to predicted plasma levels. Methods: Data from a long-term, randomized, double-blind (DB), fixed-dose, placebo (PBO)-controlled relapse prevention study in patients with schizophrenia (NCT01412060) were analyzed. Patients were stabilized with CAR during a 20-week, open-label phase, and randomized 1:1 to CAR (3-9 mg/day) or PBO for up to 72 weeks of DB treatment. Relapse was defined by objective rating scale criteria, psychiatric hospitalization, and subjective clinical measures. Published studies of other oral AAPs with similar designs (eg, open-label phase >=8 weeks, PBO-controlled) were used for comparison. Time to drug-PBO relapse separation and relapse rates were estimated from Kaplan-Meier (K-M) curves. Separation was defined as a sustained difference of >= 5% incidence of relapse between the AAP and PBO curves. Results: CAR treatment was associated with significantly delayed time to relapse compared with PBO (P=.0039, hazard ratio=0.52). The K-M curve for CAR showed a time to drug-PBO relapse separation at 6-7 weeks after randomization, compared to the K-M curves for the other oral AAPs, which showed earlier separation at 1-4 weeks. This pattern was also reflected in the PBO relapse rates, which were 5% for CAR and 8-34% for other oral AAPs at 4 weeks after last dose. At 2 and 4 weeks after last CAR dose, geometric mean values of model-predicted plasma concentrations for total CAR (sum of CAR, DCAR, and DDCAR) were 20.0 nM and 6.1 nM, respectively. Based on published EC50 estimates for D2 (13.0 nM) and D3 (3.8 nM) receptor occupancy by total CAR, these results suggest that D2/D3 receptors remain occupied 2-4 weeks after last dose. Elimination half-lives of other oral AAPs and their active metabolites (<1 day to 4 days) suggest that plasma concentrations and D2/D3 receptor occupancy would be low or negligible at 2 and 4 weeks after last dose. Conclusion: Discontinuation of CAR treatment appeared to be associated with a delayed incidence of schizophrenia relapse compared to other oral AAPs. This may be due to the longer half-life of CAR and its active metabolites, which may provide additional benefits for the prevention of schizophrenia relapse in cases of partial adherence. Prospective comparative trials are needed to confirm these results.

No. 124
Stigma Among Family Members in Guatemalan Indigenous Persons With Schizophrenia
Poster Presenter: Gabriana Brooks
Co-Author: Robert Kohn, M.D.

SUMMARY:
Background: The examination of caregiver attitudes and stigma towards family members with schizophrenia has rarely been examined. Stigma may lead to social and behavioral factors influencing barriers to treatment and quality of life. The aim of this study was to analyze factors associated with family stigma in Mayan indigenous persons, treated and untreated, with schizophrenia in Guatemala. Methods: Key informants were used to identify potential Mayan individuals over age 18 with symptoms of psychosis. Treated Mayan individuals were selected from the formal mental health system in Guatemala. Treated and untreated individuals were selected from Guatemala City and the surrounding rural areas. In addition, untreated individuals were selected from Santiago Atitlan, a community with minimal access to medical care and to television at that time. Mayan lay-interviews conducted a screening interview following obtaining informed consent, and those who screened positive for possible psychosis, were interviewed by a psychiatrist trained in the SCAN interview to confirm a diagnosis of schizophrenia. Interviews were conducted in Spanish or Tzutijil using a translator. The psychiatrist interview included the Scale for the Assessment of Positive Symptoms and the Scale for the Assessment of Negative Symptoms. The self-identified primary caregiver was interviewed using the Family Interview Schedule, which included

measures of stigma, impact of mental illness, caregiver coping, family involvement, and behavioral symptoms. Results: 129 individuals were identified by key informant; 73 had schizophrenia with 58 caregivers participating (Guatemala City Treated = 14; Guatemala City Not Treated = 5; Rural Guatemala Treated = 13; Santiago Atitlan = 26). 51.7% were male and 70.7% were single; their age ranged from 18 - 82 years (mean 33.3 ± 13.3). The caregiver informants 65.4% were females, 34.6% were males and 50% were parents. The 14-item stigma scale had a Chronbach alpha = 0.71; mean of 1.10 ± 0.52 (range 0.07 to 2.07). There was significant difference in stigma between the four study groups ($F= 4.43$, $df = 3\text{-}54$, $p < 0.007$; Guatemala City Treated = 0.88 ± 0.47; Rural Guatemala Treated = 0.98 ± 0.53; Guatemala City Not Treated = 1.23 ± 0.59; Santiago Atitlan 1.37 ± 0.36). Santiago Atitlan (untreated) had significantly greater stigma than Guatemala City Treated. Those not in treatment had greater stigma ($t = 2.25$, $df = 56$, $p < 0.03$). Other factors associated with stigma were lower caregiver education, and greater positive and negative symptoms and behavioral problems. Caregiver burden, impact on the caregiver and caregiver coping were not associated with stigma. Conclusion: Stigma was greatest among the indigenous families who had an untreated family member with schizophrenia despite controlling for symptoms and behavioral problems. Stigma also exists among those who have little contact with media. Treatment may reduce stigma associated with schizophrenia.

No. 125

IL- 6 Levels in First-Episode Psychosis: A Meta-Analysis

Poster Presenter: Himani Marathe
Co-Author: Henry A. Nasrallah, M.D.

SUMMARY:

Background: The relationship between Schizophrenia and a pathological immune dysregulation process has been a subject of scientific inquiry for close to a century (Dameshek, 1930, Blomstrom 2016) Many reports of elevated pro-inflammatory biomarkers in serum and CSF have been published suggesting an etiopathological relationship between psychosis and neuroinflammation (Kim, 2009; Muller, 2011) and also as a possible prognostic tool to predict psychosis in at-risk individuals (Khandaker, 2014; Cannon 2016). In reviewing those studies, we noted the prominence of the cytokine IL-6 among the other interleukins and decided to conduct a meta-analysis to examine the role of IL-6 as a risk predictor of the initial episode of psychosis. Methods: A PUBMED search was done using the terms 'inflammation', 'psychosis' and 'schizophrenia 'in September 2016.Studies that measured serum IL-6 in schizophrenia patients with first-episode psychosis (FEP) were considered for inclusion in this meta-analysis. To avoid overlap with a previous review published in 2013 which examined several cytokines, we focused on studies that were published after June 2013(Upthegrove 2013). A standardized mean difference (Cohen's d or Effect size) was calculated comparing IL-6 among FEP versus healthy controls. Results: 56 studies were examined for eligibility criteria and, of these, 5 met inclusion and exclusion criteria (Brinholi 2015, Noto 2016, Ding 2014, Simsek 2016, Haring 2015). Mean age ranged from 14.5yrs to 27.48yrs. The meta-analysis (n=345 FEP & n=242 healthy controls) of five studies showed a small-to-medium effect on serum IL-6 for FEP versus healthy controls (Effect Size 0.45, 95% CI 0.28 to 0.62). Together these five studies indicate that FEP patients have elevated serum IL 6 levels compared to healthy controls. Discussion: The positive correlation between increased IL 6 levels and FEP is a signal that should trigger further investigation into the role of IL 6, a pro-inflammatory cytokine, in the disease process. Possible mechanisms may be inhibiting synaptic plasticity (Tancredi, 2000) and dysregulation of neural progenitor cell proliferation (McPherson, 2011). Further studies measuring IL 6 levels before and after treatment with antipsychotics can determine whether IL 6 is a 'state-marker 'and returns to baseline or a 'trait marker' which persists at high levels in spite of effective treatment. IL 6 levels may also serve as a predictor of response to pharmacotherapy in treatment-resistant psychosis. Other cytokines such as IL 10 should also be studied as possible predictors of Psychosis.

No. 126

Fragile Self and Malevolent Others in Ultra-High Risk for Psychosis: Biased Attribution Styles and the

Multifaceted Self-Related Psychological Factors
Poster Presenter: Hye Yoon Park, M.D.
Co-Authors: Minji Bang, M.D., Ph.D., Eun Lee, M.D., Ph.D., Suk Kyoon An, M.D., Ph.D.

SUMMARY:
Background: Biased attribution styles of assigning the hostile intention to innocent others and placing the blame were found in patients with schizophrenia. The aims of this study were to investigate whether individuals at ultra-high risk (UHR) for psychosis show the increased hostility perception and blaming bias and to explore the associations of these biased styles of attribution with the multifaceted self-related psychological variables and neurocognitive performances. Methods: Fifty-four UHR individuals and 80 healthy controls participated. The multifaceted self-related psychological variables were assessed in the areas of resilience, self-perception, self-esteem and aberrant subjective experiences of schizotypy (physical anhedonia, social anhedonia, magical ideation, and perceptual aberration) and basic symptoms. Neurocognitive performances were assessed with the comprehensive neurocognitive battery, consisting of five domains (verbal memory, spatial memory, processing speed, attention/working memory, and executive function). The attribution style was assessed by using the Ambiguous Intentions Hostility Questionnaire. Results: There was increased hostility perception (2.2(0.7) vs. 1.6(0.5), $p<0.001$) and blaming bias (3.3(1.1) vs. 2.4(0.7), $p<0.001$) in UHR individuals compared to normal controls. Factor analysis of self-related psychological variables and neurocognitive performances in whole subjects showed the three factors solutions (variance 62%, KMO=0.83), which were labelled as reflective self, pre-reflective self, and neurocognition. Multiple regression analysis in UHR revealed that hostility perception bias was associated with reflective self factor [beta=-0.32, t=-2.4, p=0.022, R-square=0.10, F(1,50)=5.61, p=0.022] and composite blame bias [$F(2,50)=8.90$, $p<0.001$] was associated with reflective self (beta=-0.44, t=-3.6, p=0.001) and pre-reflective self (beta=0.36, t=2.9, p=0.005). Conclusion: Biased attribution styles may be already emerged from putative prodromal phase of schizophrenia and these attribution biases were associated with multifaceted self-related psychological constructs. These findings implicate that the psychosocial intervention for attribution style in UHR individuals should focus not only reflective self but prereflective self-related psychological constructs as well. Key words: attribution style, ultra-high risk for psychosis, reflective self, prereflective self, neurocognition
Acknowledgement: This work was supported by Basic Science Research Program through the National Research Foundation of Korea (NRF) funded by the Ministry of Science, ICT & Future Planning, Republic of Korea (Grant number: 2017R1A2B3008214).

No. 127
WITHDRAWN

No. 128
Metabolic Profiling for Schizophrenia Using Small Molecular Water-Soluble Metabolites: A Case-Control Study
Poster Presenter: Bing Cao

SUMMARY:
Background: Schizophrenia is a chronic brain disorder diagnosed primarily via psychiatrist-administered clinical scale scores. However, psychiatric impressions are prone to bias and clinical assessments are not standardized. Recently, several metabolomics studies demonstrated metabolic abnormalities in schizophrenia, especially for one set of small water soluble molecules, mainly including carbohydrates, amino acids, short chain organic acids, nucleic acids, polyamines, carnitines, vitamins, and polar lipids. Our study intended to find potential water-soluble biomarkers and metabolic pathways for mechanism exploration and objective metabolic profiling of schizophrenia. Methods: We recruited adults with schizophrenia (n=122) who had not received pharmacological treatment for at least one month prior to enrollment, including drug naïve (i.e., first episode) participants and treatment non-adherent participants. 111 healthy subjects matching the patients in age (±5 years) and gender were enrolled as controls. We applied metabolic profiling for small molecular water-soluble metabolites in serum via liquid chromatography-tandem mass spectrometry coupled with hydrophilic interaction liquid chromatography column. Results:

Serum samples from 111 healthy controls and 122 patients with schizophrenia were measured. 11 water-soluble metabolites contributed to the separation between patients and healthy controls were identified, respectively. The composition of these metabolites were carnitines (n=4, Oleoylcarnitine, L-Palmitoylcarnitine, 9-Decenoylcarnitine and 2-trans,4-cis-Decadienoylcarnitine), polar lipids (n=4, LysoPC(P-16:0), LysoPC(16:0), LysoPC(15:0) and LysoPC(14:0)), amino acids (n=2, Taurine and L-Arginine), and organic acid (n=1. 2,5-Dichloro-4-oxohex-2-enedioate). Compared with healthy controls, taurine, L-Palmitoylcarnitine and Oleoylcarnitine levels were increased, whereas other 8 water-soluble metabolites were decreased. For discrimination between patients and controls, a combine of four biomarkers, including Oleoylcarnitine, 9-Decenoylcarnitine, Lysophosphatidylcholine(LysoPC) (15:0), LysoPC(14:0), provided the best classification performance. Conclusion:The HILIC UPLC-MS based metabolic profiling study shows its potential in the identification of serum water-soluble biomarkers for the diagnosis of schizophrenia. Biomarkers that were determined to be significantly different between the groups were primarily related to cellular bioenergics. Pathways involving the imbalance of cellular bioenergics, especially fatty acid metabolism and amino acid metabolism, are primarily candidates for future studies. This work was supported by the Medicine Interdisciplinary Seed Fund (BMU20140435) by Health Science Center, Peking University.

No. 129

Risk and Benefits of Concurrent Use of Two Long-Acting Injectables (LAI) in Treatment-Resistant Schizophrenia

Poster Presenter: Waquar Siddiqui, M.D.
Co-Authors: Naga Prasuna Vanipenta, M.D., Umang Shah, M.D., M.P.H., Jianwei Jiao, M.D., Ph.D., Manar Abdelmegeed, M.D., M.P.H.

SUMMARY:

Treatment resistant schizophrenia tends to have a more severe prominent psychopathology as compared to medication responsive schizophrenia. It is estimated that between 20% and 60% of patients have schizophrenia that is resistant to treatment [1]. To a large extent, use of monotherapy in these complex cases is often inadequate, therefore add on strategies like combining two antipsychotics, and even combining long acting injectable (LAI) is implemented. LAI antipsychotics are particularly helpful in increasing adherence and reducing relapse rate [2]. They may also provide a more consistent plasma level of medication than their oral counterparts, leading to improved tolerability [3]. We are discussing a case of a 37 year old African American female with a past medical history of treatment resistant Schizophrenia, Post Traumatic Stress Disorder (PTSD), Vitamin D deficiency and Osteopenia. Patient has a history of violent behavior, paranoia and persecutory delusions. Patient was previously discharged on Paliperidone Maintenance dose, but relapsed and readmitted soon after a behavioral outburst. This time Aripiprazole (LAI) was added to Paliperidone (LAI), she was on the combination regimen for 3 months with only minimal improvement. Adequate trials of oral medications like Lurasidone, Asenapine, Seroquel, Risperidone and LAI such as Fluphenazine Decanoate and Olanzapine were tried in various combinations without any progress. She was re-started on combination Paliperidone (LAI) and Aripiprazole (LAI), and symptoms are fairly stable for the past few months, as evident by improvement in Brief Psychiatric Rating Scale (BPRS) scores, and decreased monthly aggressive behavioral episodes. Newer studies have shown some efficacy in using two concurrent LAI in complex patient population which include non compliance, and treatment resistant population. But, due to various side effects such as tardive dyskinesia, and neuroleptic malignant syndrome which are hard to reverse given the fact that the medications cannot be washed out rapidly. We suggest that a careful health monitoring be implemented in such patients.

No. 130

Monthly Extended-Release Risperidone Injections (RBP-7000) for the Treatment of Schizophrenia: Results From Two Phase 3 Trials

Poster Presenter: Jay Graham
Co-Authors: Maurizio Fava, M.D., John W. Newcomer, M.D., Anne Andorn, Sunita Shinde, Gilbert Muma, Christian Heidbreder

SUMMARY:

RBP-7000 is an investigational, subcutaneously administered, once-monthly, extended-release depot formulation of risperidone in the ATRIGEL© Delivery System. It was designed to achieve therapeutic concentrations without the need for supplemental oral dosing. In an 8-week double-blind, placebo-controlled (DBPC) efficacy and safety study that included patients with acute exacerbation of schizophrenia (NCT02109562), an MMRM analysis of change from baseline in Positive and Negative Syndrome Scale (PANSS) total score indicated statistically significant improvements at end of study (EOS) in subjects on RBP-7000 compared to placebo: RBP-7000 90mg (-6.9±2.2, P=0.0016); 120mg (-8.7±2.1, P<0.0001). At EOS, a higher percentage of subjects had a PANSS response (>=20% total score improvement from baseline) with RBP-7000 90mg (47.2%) and 120mg (47.7%,) than placebo (27.4%). Ninety-two completers from the DBPC trial rolled over into a 1-year open-label study (NCT02203838) in which they received 11 monthly injections of RBP-7000 120mg. This study also included 408 de novo patients (with a DSM-IV-TR diagnosis of schizophrenia and PANSS total score <=70) who received 13 monthly injections of RBP-7000 120mg after titration or conversion from oral risperidone. The long-term study was not powered for efficacy analysis, but PANSS total score showed a decreasing trend (improvement) from baseline to EOS (±SD) in rollover subjects who previously received RBP-7000 90mg (-12.5±15.5) or 120 mg (-10.9±13.2). A larger mean improvement was found in subjects who previously received placebo (-20.2±15.59), but the number of evaluable subjects was small. Among de novo subjects, who were stable at enrollment, a minimal mean change in PANSS total score (-0.4±8.7) indicated continued stability. At EOS in the long-term study, 44.4% of all rollover subjects and 7.6% of de novo subjects were considered responders (>=20% decrease in PANSS total). In the 8-week study, common treatment-emergent adverse events (TEAEs) in RBP-7000 subjects included injection site pain, headache, and weight increase, none of which led to discontinuation. Two serious TEAEs (SAEs) were reported, but were not related. In the long-term safety study common TEAEs were injection site pain and weight gain. These TEAEs led to discontinuation in 5 de novo subjects (1 injection site pain, 4 weight gain). In the long-term study, the overall incidence of SAEs was 6.8% and included 4 deaths; no SAE was considered related to study drug. No clinically meaningful changes in laboratory parameters, vital signs, electrocardiogram parameters, suicidal ideation/behavior, or extrapyramidal symptoms were observed. In general, the safety profile seen with 12 monthly injections of RBP-7000 was consistent with that of oral risperidone. Moreover, schizophrenia symptoms continued to improve in previously exposed subjects with acute schizophrenia who rolled over into the longer-term study. Sponsored by Indivior, Inc.

No. 131

Long-Term Valbenazine Treatment in Patients With Schizophrenia/Schizoaffective Disorder or Mood Disorder and Tardive Dyskinesia

Poster Presenter: Jean-Pierre Lindenmayer, M.D.
Co-Authors: Carlos Singer, Cynthia Comella, Khodayar Farahmand, Josh Burke, Roland Jimenez, Scott Siegert

SUMMARY:

Background: Patients treated with antipsychotics, regardless of psychiatric diagnosis, are at risk for developing tardive dyskinesia (TD), a potentially debilitating drug-induced movement disorder with negative social, emotional, and physical impacts. Valbenazine (INGREZZA; VBZ) is a novel vesicular monoamine transporter 2 (VMAT2) inhibitor approved to treat TD in adults. Data from KINECT 4 (NCT02405091) were analyzed to evaluate the long-term effects of VBZ (40-80mg) in adults with schizophrenia/schizoaffective disorder (SZD) or mood disorder (MD). Methods: KINECT 4 included open-label treatment (48 weeks) followed by washout (4 weeks). Entry requirements included: moderate or severe TD, based on clinical diagnosis (severity qualitatively assessed at screening by a blinded, external reviewer); DSM diagnosis of SZD or MD; and psychiatric stability (Brief Psychiatric Rating Scale score <50). Stable concomitant psychiatric medications were allowed. All dosing was initiated at 40mg, with escalation to 80mg at Wk4 if participants had a Clinical Global Impression of Change-TD score of >=3 (“minimally improved” to “very much worse”) and tolerated the 40mg dose. A reduction to 40mg

was allowed if 80mg was not tolerated (80/40mg group). Although safety was the primary focus, the Abnormal Involuntary Movement Scale (AIMS) total score (sum of items 1-7) was used to evaluate changes in TD. Mean changes from baseline (BL) through Wk52 in AIMS total score (rated by on-site investigators) were analyzed descriptively. Safety assessments included treatment-emergent adverse events (TEAEs). Psychiatric stability was monitored using the Positive and Negative Syndrome Scale (PANSS), Calgary Depression Scale for Schizophrenia (CDSS), Montgomery-Åsberg Depression Rating Scale (MADRS), Young Mania Rating Scale (YMRS), and Columbia-Suicide Severity Rating Scale (C-SSRS). Results: Of the 163 participants in the analyses, 103 completed the study. Adverse events (n=41) was the most common reason for discontinuation. Analyses included 119 participants with SZD (40mg=37; 80mg=76; 80/40mg=6) and 44 with MD (40mg=8; 80mg=31; 80/40mg=5). At Wk48, mean improvements from BL in AIMS total score were as follows: SZD 40mg: -10.1; 80mg: -10.7; 80/40mg: -7.4, MD 40mg: -10.2; 80mg: -11.6; 80/40mg: -7.0. AIMS total scores at Wk52 (end of washout) indicated a return toward BL levels. Discontinuation due to TEAEs occurred more frequently in the SZD subgroup (18%) than the MD subgroup (7%). Psychiatric status remained stable from BL to Wk48 in both subgroups: SZD (PANSS positive, -0.7, PANSS negative, -0.6; CDSS, -0.7); MD (MADRS, -0.3; YMRS, -0.3). Most participants (95%) had no change in C-SSRS score during the study. Conclusion: Sustained and clinically meaningful TD improvements were observed with VBZ, regardless of primary psychiatric diagnosis. VBZ was generally well tolerated and no notable changes in psychiatric status were observed. Supported by Neurocrine Biosciences, Inc.

No. 132
Relation Between Early-Onset Psychosis and Formal Thought Disorder in Schizophrenia
Poster Presenter: Koksal Alptekin, M.D.

SUMMARY:
Background: Formal thought disorder is one of the fundamental features of schizophrenia. Early onset schizophrenia (EOS) is strongly related to poor prognosis and illness outcomes 1,2. The aim of this study is to investigate the relation of EOS and formal thought disorder in schizophrenia. Methods: This research was a retrospective study. Data regarding the patients with schizophrenia were obtained from two separate studies conducted at Dokuz Eylul University. Thought disorder scores were compared between 32 patients with early onset schizophrenia (EOS; age ≤ 18) and 120 patients with adult onset schizophrenia (AOS; age > 18). Also we looked at the effect of Duration of Untreated Psychosis (DUP). We further categorized these two sets as short DUP (short DUP; ≤ 6 month) and long DUP (long DUP; > 6 month) groups. Results: Schizophrenia patients with early onset showed significantly higher scores compared to adult onset schizophrenia patients with regards to poverty of speech (U= 1525.50; p = .037) and peculiar sentences (U= 1613.50; p = .043). Discussion: Early onset schizophrenia patients had significant formal thought disorder abnormalities. Formal thought disorder may have some developmental characteristics which indicate an important dimension related to prognosis and outcome of schizophrenia. Also DUP may have potential effect over formal thought disorder.

No. 133
WITHDRAWN

No. 134
Understanding Treatment-Resistant Schizophrenia Through Observational Database Studies
Poster Presenter: Linus Jonsson
Co-Author: Cecilia Brain, M.D., Ph.D.

SUMMARY:
Background: Treatment-resistant schizophrenia (TRS), clinically defined as failure to respond to two trials of antipsychotics (APs) of adequate dose and duration, affects about one-third of patients with schizophrenia and leads to poorer clinical outcomes. The biological mechanisms of treatment resistance and heterogeneity in response to APs are incompletely understood. Large healthcare databases, containing the longitudinal medical data of thousands of patients may help improve this understanding and identify optimal management strategies for different patient subtypes. The identification of patients with TRS in such datasets is problematic since patient response and adherence to medication is rarely reported. Previous studies

have relied on proxies, e.g. hospitalizations, for non-response to medication, but there is no consensus on how these should be constructed and a paucity of data to validate the methodology. This study provides an algorithm for the retrospective identification of patients likely to have TRS based on medication data commonly available in large administrative datasets. It compares clinical outcomes for likely TRS vs schizophrenia responsive to treatment (non-TRS) as a step towards validating the algorithm. Methods: The PsykosR registry, established in 2004, is a Swedish population-based registry of patients with psychotic disorders. The registry contains Global Assessment of Function (GAF) scores and, through record linkage with other databases, prescription drug use, health care resource use and mortality. All newly diagnosed patients treated for schizophrenia since 2006 (n=3343) were included in the study. The mean duration of follow-up in the registry was 5 years from diagnosis. AP treatment failure was defined as medication discontinuation with no evidence of prior dose reduction (could indicate intolerance), initiation or switch to another antipsychotic within 15 weeks (potential non-response). TRS was designated after failure of two AP trials. Results: 455 patients had at least two treatment failures and were identified as likely having TRS. The mean time from diagnosis until TRS designation was 1.8 years. 1255 subjects had at least one GAF measure during the follow-up period, of which 181 met criteria for TRS. Over the duration of follow-up, GAF scores were consistently lower (indicating poorer functioning) in patients with likely TRS compared to non-TRS. In a mixed effects regression model, likely TRS cohort was associated with a 5.3 point lower GAF score ($p<0.0001$) on the 100 point scale. Conclusions: Patients with TRS can potentially be identified in retrospective databases through an algorithm based on pharmacy usage patterns. In the study the algorithm identified patients with on average worse clinical outcome as measured by GAF. Further studies of this subgroup in large databases might better characterize the clinical burden of TRS promoting efforts to improved identification and prompt treatment of TRS.

No. 135

Ekbom Syndrome in a General Hospital: A Case Report

Poster Presenter: Lourdes Thalita Meyer de Andrade Cavalcanti, M.D.
Co-Authors: André Furtado de Ayalla Rodrigues, M.D., Mariana Mello

SUMMARY:
Ekbom syndrome, also known as delusional parasitosis, has an incidence of 1.9: 100000 people per year, and predominates in middle-aged and low-educated women, being associated with some clinical diseases, such as diabetes. In addition to the delirium, it may present pruritus, numbness, folie à deux, self-mutilation and “box of matches signal” (skin blades and substances that adhere to lesions, which patients claim to contain parasites). The diagnosis is done by exclusion and it usually responds to low doses of antipsychotics, as pimozide, olanzapine and risperidone. This work aims to discuss the construction of the diagnosis of Ekbom syndrome and the Psychiatrist intervention. MNPS, 67 years old, from Recife, city of Brazil, illiterate, retired, had pruritus and wound at upper limbs, face, scalp and lower limbs since october 2015. Injuries were produced in an attempt to remove “bugs” that walked on his skin. In ambulatory follow-up of Internal Medicine, where it was performed a investigation and treatment for parasitosis, she did not present alterated laboratorial tests. She was admitted to the ward of Internal Medicine and was evaluated by the Dermatology, which excluded dermatological causes. An medical opinion from Psychiatry was requested, and during the interview it was noticed that the patient was itchy and unchanged and had the somatic delirium of infestation, with tactile and visual hallucinations. She was also showing skin scabs that she had separated to show the “bugs” of her skin. In an outpatient follow-up, she reported that “the bugs are gone, but the nits still have it, especially in the hair”. It was precribed risperidone 2mg/day and after 5 days, she said that “the bugs were walking less because they were dying”. At follow-up in Psychiatric ambulatory, she reported partial improvement. She had no more skin lesions and was scratching herself less. Risperidone was increased to 3 mg / day. Patient discontinued the medication due to akathisia and returned with the worsening of the symptoms: she cut her hair, was changing her bed

sheets more often than usual and was passing alcohol on her body. Risperidona was substituted by pimozide with stabilization of clinical signs at 4 mg/day. Thus, it was concluded that this patient presented a compatible epidemiological profile and psychopathology for the Ekbom syndrome, whose diagnosis is of exclusion and is obtained through multidisciplinary knowledge and partnership.

No. 136

Eleven Years of Electroconvulsive Therapy for Treatment-Resistant Schizophrenia in 22q11.2 Deletion Syndrome: Case Report and Review of the Literature

Poster Presenter: Judy Truong
Co-Authors: Lily Van, M.D., Anne Susan Bassett, M.D.

SUMMARY:
Ms. A., a 39-year old Caucasian female with schizophrenia, 22q11.2 deletion syndrome (22q11.2DS, formerly known as DiGeorge or velocardiofacial syndrome) and mild intellectual disability, was admitted for the third time to a psychiatric hospital for worsening psychotic symptoms and severe agitation. Throughout the course of her illness, she had been managed on numerous antipsychotic medications, including haloperidol for 4 years and loxapine for 8 years, as well as trials of risperidone, olanzapine, perphenazine, thioridazine, methotrimeprazine, and chlorpromazine, which were ineffective or not tolerated. For the previous 8 years, her symptoms had been controlled on clozapine but she had developed severe persistent neutropenia leading to discontinuation. She was then further trialed on quetiapine and aripiprazole. Due to the severity of her condition and poor response to pharmacological therapy, right unilateral electroconvulsive therapy (ECT) was initiated. She received 14 ECT treatments during her hospitalization, which resulted in significant improvement in mood, behavior, and psychotic symptoms. She tolerated the ECT well with no significant adverse events and was subsequently discharged on quetiapine 1000 mg with a recommendation to continue weekly ECT treatment as an outpatient. To date, she has received over 490 treatments spanning over 11 years. Multiple attempts to lengthening the period between ECT treatments each resulted in relapse of psychotic symptoms including hallucinations, paranoia, and disorganized behavior as well as agitation. Since the initiation of ECT, she has demonstrated both improved psychotic symptoms and functioning (improved self-care and increased community engagement). All of these aspects are significantly better than baseline on pharmacotherapy alone. She is now relatively stable in remission with no overt psychotic symptoms and has had no psychiatric hospitalization in 11 years. In terms of cognitive side effects, 4 years into treatment, there was mention of some short-term memory impairment, although it was unclear whether this was due to cognitive decline associated with schizophrenia and/or lorazepam usage. She has otherwise experienced little to no side effects. Schizophrenia occurs in ~25% of individuals with 22q11.2DS and the associated 22q11.2 deletion is the strongest known molecular genetic

No. 137

Association Between Autoimmune Diseases and Schizophrenia in 22q11.2 Deletion Syndrome

Poster Presenter: Judy Truong
Co-Authors: Lily Van, M.D., Elemi Breetvelt, M.D., Anne Susan Bassett, M.D.

SUMMARY:
Background: Studies suggest a possible association between autoimmune diseases and schizophrenia; however, this relationship has not yet been studied in patients with 22q11.2 deletion syndrome (22q11.2DS) who represent a high-risk genetic model for schizophrenia. Patients with 22q11.2DS have higher rates of autoimmune diseases compared to the general population and approximately 1 in 4 adults with 22q11.2DS will develop schizophrenia. Given the interest in immunity and risk for schizophrenia in the general population, we investigated the potential link between autoimmune diseases and schizophrenia in patients with 22q11.2DS. Methods: The life-time medical records of a well-characterized cohort of 271 adults with 22q11.2DS were retrospectively reviewed for documentation of 30 autoimmune diseases and a diagnosis of schizophrenia. The relationship between autoimmune diseases and schizophrenia was evaluated by calculating the odds ratios (OR) and 95% confidence intervals (CI) along with chi-square

tests. A multivariate logistic regression was conducted to adjust for age and sex. Results: The cohort comprised 128 males (47%) and 143 females (53%) with 22q11.2DS. The mean age was 33 years (range: 18-68; SD: 12.3). Of the 271 patients, 94 (35%; n=41 males) had a documented autoimmune disease, including 21 (8%) adults with more than one autoimmune disease. Schizophrenia was diagnosed in 97 (36%; n=50 males) patients; 45 (46%) of these patients had a comorbid autoimmune disease. The autoimmune diseases present in this population included: hypothyroidism (n=61, 23%), psoriasis (n=23, 8%), immune thrombocytopenia purpura (n=11, 4%), vitiligo (n=7, 3%), and hyperthyroidism (n=5, 2%). Six rarer autoimmune conditions affected 1 or 2 individuals each. Patients with 22q11.2DS and an autoimmune disease were significantly more likely to have a diagnosis of schizophrenia (OR=2.21, CI: 1.32 to 3.71, p = 0.003) than those without an autoimmune disease. After adjusting for age and sex, the odds ratio was 1.92 (CI: 0.11 to 1.19, p = 0.02). Conclusions: Autoimmune diseases and schizophrenia show significant comorbidity conditions in adults with 22q11.2DS. The 22q11.2 deletion may represent a shared genetic risk factor that could help elucidate the mechanisms underlying both conditions. Additional studies using larger populations of such conditions as 22q11.2DS that have enhanced genetic homogeneity may help further characterize the association between aberrant autoimmune processes and the pathophysiology underpinning the development of psychotic illness.

No. 138

Differences in Personality, Defense Style, and Coping Strategy According to Age Groups in Depressed Patients

Poster Presenter: Jooseok Park
Co-Authors: Miae Oh, Won Sub Kang, Jongwoo Kim

SUMMARY:

Background: The onset of depression is known to be associated to individual's personality, defense style, coping strategy. And there are also studies on the changing patterns of personality, defense, coping by age. We aimed to investigate the differences in personality, defense style, and coping style in depressed patients according to age groups. Methods: At the Kyunghee university hospital in South Korea, we enrolled outpatients and inpatients who met DSM-IV-TR criteria for major depressive disorder. The severity of depression was assessed by using Hamilton Depression Scale(HAM-D). The Neuroticism-Extraversion-Openness Personality Inventory-Revised(NEO-PI-R) was administered to the subjects and the five dimensions of personality were examined. Using the Korean-Defense Style Questionnaire(K-DSQ) and the Korean version of the coping checklist, we examined the defense and coping style, respectively. Results: This analysis included 62 men(32.5%) and 129 women(67.5%)(aged 19~81). In the analysis of five dimensions of personality using NEO-PI-R, the mean value of agreeableness was significantly higher in the 40s (mean, 46.31), 50s (mean, 45.31), and 60s (mean, 46.90) than the 20s (mean, 36.29) (p = 0.044, p = 0.020, p = 0.004 respectively). Neuroticism items showed differences in the 20s and 50s, and the mean value in the 20s (mean, 65.42) was higher than that of the 50s (mean, 54.28)(p = 0.007). In the analysis of coping style, the only significant difference between the age groups was the problem-focused coping item(p = 0.041). The post-hoc analysis showed that the mean value in the 20s were lower than that of the 60s(p = 0.026). There was no statistically significant difference in defense styles by the age groups. Conclusion : In the present study, depressed patients in their twenties showed lower agreeableness, higher neuroticism, and problem-focused coping style than other age groups. There was no difference in defense style between age groups. Further research including comparison with healthy control may be needed to determine the age-related changes in personality, defense style, and coping style.

No. 139

Suicide After Discharge From Psychiatric Admission and Its Timing in Korea: A National Health Insurance Database Study

Poster Presenter: Kyuman Han
Lead Author: Jooseok Park
Co-Authors: Kyunghoon Kim, Mikyung Lee, Jong-Woo Paik, M.D.

SUMMARY:

Suicide is a global mental health problem. South

Korea has the highest suicide rates among the OECD countries. Suicide is largely associated with psychiatric illness, and suicide rate is known to increase after discharge from psychiatric admission. The aim of this study was to investigate the timing of suicide after discharge using the national insurance database to highlight the risk period of post-discharge suicide. We analyzed health insurance claims data from January 1, 2009 to December 31, 2014. Individuals diagnosed with mental illness (F code; n=445,271) were included in the study. Suicide data were obtained from the national statistical office. Between 2009 and 2013, the total number of psychiatric inpatients was 445,271 (239,551 male) and 5985 suicides occurred until 2014. A total of 3,225 deaths (53.9%) from suicide occurred within one year (suicide rate: 733 per 100,000 individuals). Of those, 923 suicides (15.4%) occurred in a month and 513 suicides (8.6%) within a week. The post-discharge suicide rate in one year was 733 per 100,000 individuals, which is 26 times that in the general population in Korea. In order to prevent suicide after discharge, it may be crucial to identify high-risk individuals and provide them with frequent outpatient care and case management at community mental health centers. This study was supported by a grant of the Korean Mental Health Technology R&D Project, Ministry of Health & Welfare, Republic of Korea (No.: HI16C2329).

No. 140

Romantic Attachment in Patients With Mood and Anxiety Disorders

Poster Presenter: Donatella Marazziti, M.D.

SUMMARY:

The attachment style can be defined as a set of representations including behavioural, emotional and cognitive features emerging when one individual relates to another and resulting from early experiences with the so-called “attachment object”. Although the attachment process begins and is set up during early years, through the formation of emotional ties between the infant and primary caregivers, several studies have shown that attachment is relatively stable along the life. Early relationships represent not only the basis for those occurring later in adulthood and shape adult styles underlying normal attitudes and behaviours, but also they are supposed to predispose or influence the development of any subsequent psychopathological conditionAlthough early inadeguate experiences do not necessarily result in subsequent full-blown psychopathological disorders, they may nevertheless be of particular significance due to the complex, systemic and transactional nature of such conditions, when they do develop. The romantic attachment (RA) is the establishment of a relationship with a partner and is strongly influenced by the individual’s attachment style. While several studies have shown that attachment style may contribute to the development of psychopathology, less information is available for RA. The aim of the present study was, therefore, to compare RA styles amongst patients with different mood and anxiety disorders and control subjects. The study sample included a total of 126 outpatients, of whom 62 affected by bipolar disorders (BD), 22 by unipolar major depression (MDD), 27 by panic disorder (PD) and 15 by obsessive-compulsive disorder (OCD), and 126 healthy control subjects. The RA was assessed by means of the Italian version of the “Experiences in Close Relationships” (ECR) questionnaire. The results showed that the secure attachment style was more frequent in the control group, while the preoccupied style prevailed amongst the patients, with no difference amongst the diagnostic categories. The scores of the ECR anxiety and avoidance scales were significantly higher in the patients than in the control subjects. A trend towards higher ECR anxiety scale scores in women with PD was detected, with the reverse being true for MDD. Our findings indicate that patients with different psychiatric disorders would be characterized by higher score of both the ECR anxiety and the avoidance scales, as well as by the preoccupied style of attachment. In addition, women with PD and MDD seem to be characterized by, respectively, higher and lower scores of the ECR anxiety scale than men.

No. 141

Evaluation of Plasma Amyloid-? Levels Before and After Electroconvulsive Therapy in Drug-Resistant Bipolar Disorder Subjects

Poster Presenter: Armando Piccinni
Co-Authors: Stefano Baroni, Federica Vanelli, Federico Mucci

SUMMARY:
Background A great bulk of current literature highlights the association between alterations of plasma amyloid-? (A?) peptide levels and higher risk of cognitive impairment and dementia in Alzheimer's disease (AD). Interestingly, a similar relationship has been reported more frequently in patients suffering from mood disorders than in the general population [1-2]. Given the scarcity of available data, the aim of the present study was to evaluate peripheral plasma levels of A? peptides (A?40 and A?42) and the A?40/A?42 ratio in a group of drug-resistant depressed and bipolar patients who underwent ECT treatment. Also, the study assessed the presence of possible relations between biological parameters and clinical changes. Methods Thirty patients (12 men and 18 women, mean age ± SD: 46.5 ± 13.2 years), suffering from drug-resistant bipolar disorder (type 1 and 2) and from major depression were recruited from in- from the outpatients' wards of the Department of Psychiatry at Pisa University, before the first session of ECT treatment. The severity of depression was evaluated by means of the Hamilton Rating Scale for Depression (HRSD-21) and the Clinical Global Impression-Severity of Illness Scale (CGI-S), while the cognitive impairment by means of the Mini-Mental State Examination (MMSE). Questionnaires were presented to patients before the first ECT session (T0), and after the last (T1) (mean number of ECT session: 7±3). Blood samples were collected at both T0 and T1 for the evaluation of A?40 and A?42 plasma levels by means of an ELISA assay Results Eleven patients showed a clinical remission after ECT (HRSD?10), albeit every patient displayed a clinical improvement, as shown by the significant decreases of both HRSD and CGI-S total scores from T0 to T1. By converse, on the same period, a significant increase of MMSE total score was found. Although plasma A?40 levels, A?42 levels and A?40/A?42 ratio appeared to be similar at T0 and T1, the A?40/A?42 ratio resulted be positively correlated to the HRSD total score at both T0 and T1, while the MMSE total score was correlated negatively at T1. In addition, while A?40 levels were positively and significantly correlated to HRSD total score at both T0 and T1, A?40 levels were correlated negatively with the MMSE score both at T0 and T1. Finally, the number of affective episodes was positively related to the A?40/A?42 ratio, and remitting patients were found to have a lower A?40/A?42 ratio at T0. Conclusions Although a prominent bias of this study is the small sample size, our results point out a significant correlation between the severity of cognitive and depressive symptoms and the A?40 plasma levels and the A?40/A?42 ratio in depressed patients. In particular, a low A?40/A?42 ratio might be a possible predictor of ECT response or improvement, while an higher value seems to be related to more severe cases.

No. 142

Comparison of Pharmacological Prescribing Patterns of Obsessive-Compulsive Disorder in Italy

Poster Presenter: Donatella Marazziti, M.D.
Co-Authors: Federico Mucci, Stefano Baroni, Armando Piccinni

SUMMARY:
Background: Obsessive-compulsive disorder (OCD) is a debilitating neuropsychiatric disorder characterized by experiencing intrusive thoughts and/or carrying out repetitive and ritualized behaviors that are time consuming and invalidating. Despite its relative ease of diagnosis, OCD still remains underdiagnosed and/or not properly treated [1]. Besides delayed therapeutic effect and treatment resistance, some therapeutic failures may be due to different prescribing practices. The aim of the study was to investigate the psychopharmacological prescribing patterns in large sample of patients (n =1800) recruited from four Italian centers specialized in OCD, in comparison to available national and international guidelines. Methods: The centers were asked to complete a specific data sheet questionnaire on patients' therapeutic status. Statistical analyses were carried out by SPSS. Results: Selective serotonin reuptake inhibitors were the most prescribed drugs in all centers, whereas clomipramine and other tricyclic antidepressants wwere mostly used in Rome and Pisa. Mood stabilizers were almost exclusively prescribed in Pisa, while atypical antipsychotics were often used in Pisa and in Milan. Conclusions: Although still following the available guidelines about pharmacological treatment of OCD [2], a slight but significant degree of variability emerges from the four main specialized centers in Italy possibly

depending on the different educational background, the presence of comorbidities and the availability of other specific therapeutic strategies.

No. 143

Antihistamines May Do the Opposite by Worsening Insomnia: Cross-Sectional Study Using Polysomnographic Comparison of Subjects on Sleep-Aid

Poster Presenter: Kyoung Bin Im
Co-Authors: Jungwon Kim, Rachel Maurer, M.D.

SUMMARY:
Background: Over-the-counter antihistamines such as diphenhydramine are one of the most frequently used sleep-aid. Nevertheless, studies using polysomnogram (PSG), a gold standard of qualifying and quantifying sleep showing the efficacy of antihistamine in comparison to other sleep aids are lacking. Moreover, there are many reports of antihistamine being the contributing factor of restlessness and restless legs syndrome. We conducted a study showing the effect of sleep aids on the sleep time parameters using PSG database and performed more in-depth analysis focusing on antihistamine. Methods: Adult subjects using sleep-aid were identified from the PSG database. Sleep-aids were categorized based on the affecting neurotransmitter receptors as the following: antihistamines (AH), benzodiazepines (BDZ), BDZ receptor agonists (Z-drug), sedating tricyclic antidepressants (TCA), 5-HT2A antagonists (5HTA: trazodone, mirtazapine, quetiapine) and melatonin agonists (MTN). We examined the PSG time parameters of total sleep time (TST), sleep efficiency (SE), sleep latency (SL), and wake after sleep onset (WASO) per each sleep aid category. Additionally we have compared the sleep parameters of AH users to sleep aid non-users. Results: This analysis included 240 subjects taking sleep-aid with mean age 49.6 years categorized per the type of sleep aid: 35 AHs, 66 BDZs, 25 Z-drugs, 35 TCAs, 67 5HTA, 12 MTNs. All 240 subjects mean sleep parameters were as the following: TST 346 min, SE 79.8%, SL 22.5 min, WASO 64.4 min. AH users were worst in every sleep parameters measured with the following: TST 298 min, SE 72%, SL 32.6 min and WASO 83.8 min. Statistically, when adjusted for age, sex, body-mass index (BMI), and apnea-hypopnea index (AHI), AH users showed significantly worse TST than MTN, BDZ, 5HTA and TCA (p values <0.0001, 0.0006, 0.0040 and 0.0084 respectively), significantly worse SE than 5HTA, BDZ, MTN and TCA (p values 0.0040, 0.0097, 0.013, and 0.016 respectively), significantly worse SL than Z-drug, MTN and 5HTA (p values 0.025, 0.034 and 0.049 respectively) and significantly worse WASO than 5HTA and TCA (p values 0.018 and 0.046 respectively). As the AH showed the worst sleep parameters, we have compared AH users to sleep aid non-users (607 subjects) and all four sleep parameters were worse in AH users with the TST being significantly worse (333 min in non-user vs 298 min in AH; p = 0.015). Conclusion: Sedating antihistamines are worst in every single sleep parameter categories measured using PSG in comparison to other sleep-aids including melatonin. The routine use of OTC antihistamine use as sleep-aid should be cautioned or discouraged. More research on sleep related adverse effects of antihistamines is warranted.

No. 144

Bipolar Disorder—a Psychiatric Comorbidity in Patients With Prader-Willi Syndrome: A Case Series

Poster Presenter: Deepan Singh, M.D.

SUMMARY:
Case Presentation: Here we present 5 cases of pediatric and adolescent patients with PWS who exhibited episodic manic or hypomanic symptoms indicative of bipolarity. We subsequently discuss the individual treatment regimens of each patient. Literature Review: Prader-Willi Syndrome (PWS) is a genetic disorder caused by loss of function on chromosome 15 (q11-q13). Baseline behavioral probles such as preoccupation with food or skin picking can make psychiatric diagnoses difficult to recognize in this population,6,8. Obsessive-compulsive tendencies and aggression are well known psychiatric illnesses seen in younger PWS populations4-5,8. Autism spectrum diagnoses have been noted as well9. However, little has been reported on the pediatric and adolescent population regarding bipolarity. In regards to treatment of psychiatric comorbidity, SSRIs have had efficacy in limiting obsessive compulsive and aggressive symptoms in some patients4. For psychotic episodes, atypical antipsychotics have had some

success, as well as lithium for cycloid psychosis in adults2. Regardless of diagnosis, psychiatric comorbidity is an atypical feature of PWS10. When it does occur, individualized treatment should be explored to address these issues for optimization of patient health. Clinical Significance: We have shown that bipolarity can be seen in pediatric and adolescent patients with PWS. The use of the antipsychotic Ziprasidone in these patients has helped to prevent further manic episodes. Ziprasidone, a weight neutral atypical, may be a better option than other atypicals when considering hyperphagia in PWS patients.

No. 145

Describing the ALPIM (Anxiety, Laxity, Pain, Immune, and Mood) Syndrome in Adolescents: Separation Anxiety May Be an Independent Predictor

Poster Presenter: Deepan Singh, M.D.

SUMMARY:

A novel spectrum disorder comprising a core anxiety (A) disorder along with co-morbidities in the joint laxity (L), pain (P), immune (I), and mood (M) domains-dubbed the ALPIM syndrome, has been described in adults. However, no study has examined its existence in adolescents. This study was designed to identify the occurrence of ALPIM syndrome in individuals under eighteen and replicate its existence in adults. In addition, Separation anxiety disorder (SAD) was explored as a comorbidity of ALPIM. Medical records including psychiatric and medical documentation of adolescents and young adults between 11 to 34 years were evaluated by the behavioral health department at a university hospital during a contiguous year long period were evaluated retrospectively using the ALPIM Questionnaire v.2. Analyses were conducted to see if ALPIM stands out as a syndrome beyond what is expected with anxiety alone. 188 patients [age 17.5 ± 5.5 years, 67% female) met the inclusion criteria and were retrospectively enrolled in this study. Females were 5 times more likely to be on the ALPIM spectrum vs. male (p-value = 0.035). 149 patients had one or more anxiety disorders and 39 patients had MDD. Within this cohort of patients, 68% (61%-75%) met the criteria for GAD, and 69% (62%-75%) have had a major depressive episode. Multivariable model for ALPIM indicates that separation anxiety is an independent predictor of ALPIM. Patients with separation anxiety were 7.5 times more likely to have ALPIM (p-value < 0.001). These patients included 20 ALPIM cases (10.6%), defined as patients having one or more diagnoses from each ALPIM sub-domain. The ALPIM syndrome exists in children and young adults. Having SAD may be an independent predicting factor for the occurrence of ALPIM syndrome.

No. 146

Childhood Sexual Abuse and Suicide Attempt History: Gender Differences in a Sample of Adult Psychiatric Outpatients in New York City

Poster Presenter: Haitisha Mehta
Co-Authors: Mariah Hawes, M.A., Nicolette Molina, Cindy Forestal, Zimri Yaseen, M.D., Igor I. Galynker, M.D., Ph.D., Paul J. Rosenfield, M.D.

SUMMARY:

Abstract: General population findings show that childhood sexual abuse (CSA) is associated with an increased risk of suicidal behavior among adults. Further CSA in clinical studies have focused on suicidal behaviors among females leaving a dearth of information about male suicidal behavior. This study investigates gender differences related to CSA and suicidal behavior within a clinical sample. Methods: Male and female adult psychiatric outpatients ages 18 years to 79 years (N=369) were administered with Childhood Trauma Questionnaire (CTQ). The sexual abuse subscale of the CTQ was used for this analysis. Participants were also interviewed about their history of suicidal behavior through the Columbia Suicide Severity Rating Scale (CSSRS). Results: Out of 369 participants, 245 were females and 124 were males, out of which 128 females and 36 males reported at least some degree of CSA. A chi-squared test of independence on dichotomized CSA score and lifetime number of suicide attempts found that sexual abuse was associated with an increased likelihood of reporting a past suicide attempt in females, ??2= 11.29, p < .001, but not males, ??2 =0.19, p = .66. A Mann Whitney U test revealed that, among participants who reported at least some degree of childhood sexual abuse, females who reported a previous suicide attempt tended to

report more severe sexual abuse than females that did not, U = 1516.5, p = .014. No differences were found in severity of sexual abuse between males who had and had not made a previous attempt. Conclusion: The results suggest that CSA is associated with an increased risk of suicide in females, but not males. Further research is needed to address whether the observed gender differences in the relationship between sexual abuse and suicide risk may be attributed to gender differences in reporting sexual abuse or represent gender differences in the impact of sexual abuse.

No. 147

Treatment Adherence in Adults With Suicidal Ideation: A Retrospective Analysis From the Electronic Medical Record

Poster Presenter: Jaclyn Schwartz, Ph.D.
Co-Authors: Mansi Somaiya, Chelsea Cosner, Adriana E. Foster, M.D.

SUMMARY:

Background: Suicide is the 10th highest cause of death in the US causing over one million deaths per year worldwide. In 2013, 3.9% of US population (9.3 million) reported suicidal thoughts, 1.1% made a plan, and 0.6% made an attempt. Treatment for suicidal ideation includes medication and therapy. Both interventions require continued follow-up with mental health professionals to optimize the medication regimen and develop adaptive coping skills. Unfortunately, persons with suicidal ideation often fail to adhere to their treatment resulting in worse health and outcomes. Despite the importance of this area, there is a lack of research on treatment adherence for adults with suicidal ideation. Methods: In a retrospective chart review, we analyzed demographics, diagnoses, medication, duration of suicidal ideation, number of visits for adults with suicidal ideation in an outpatient practice. Patients were included in this study if they had a charted Columbia Suicide Severity Rating Scale (C-SSRS) score of 1 or higher in the past 19 months. Data were analyzed using descriptive statistics and chi square analyses. Results: Of 1,282 patients, 68 (5.3%) reported suicidal ideation during the study period and 66 patients had complete data. On average, participants were 44 years old and female (63.6%, 42). While race was not recorded in 62.1% (41) most participants were white (31.9%, 22) or black (4.5%, 3). 71.2% (47) had major depressive disorder, 37.9% (25) had anxiety disorder, and 31.8% (21) had a substance-abuse disorder. Medication changes were a significant predictor of treatment adherence before ($X2 = 4.07$, $p<.05$) and after ($X2 = 18.36$, $p<.05$) suicidal ideation. Of the 75.8% (50) patients that received psychiatric care at the clinic prior to suicidal ideation, most of them (33, 66%) received medication changes. Psychiatrists only changed the medications of 37.5% (6) of persons whom had not established care previously. Patients who had their medications changed were significantly more likely to return for follow-up care. While 48.5% (32) of people with medication changes came back for follow up appointments, only 12.1% (8) of patients without medication changes returned. Persons with substance-abuse disorders were also significantly less likely to return for follow-up care ($X2 = 4.07$, $p<.05$). Of all the patients seen for suicidal ideation, 39.4% (26) did not return for follow-up. Conclusions: Similarly to other psychiatric populations, treatment adherence is a considerable issue for adults with suicidal ideation. Psychiatrists should consider factors within their control, such as changes to the medication regimen, and account for unalterable factors, such as comorbid substance abuse disorder, to optimize treatment adherence after suicidal ideation.

No. 148

WITHDRAWN

No. 149

Sexual Desire, Fear and Suicide: Acute Changes in Affect Intensity Offer Predictive Insight on Suicidal Behavior in Adult Psychiatric Outpatients

Poster Presenter: Joshua Starr
Co-Authors: Tal Ginsburg, Mariah Hawes, M.A., Irina Kopeykina, Paul J. Rosenfield, M.D., Igor I. Galynker, M.D., Ph.D.

SUMMARY:

Background: Past research has investigated trait-based affective intensity in the transition from suicidal ideation (SI) to suicidal behavior (SB), yet few have considered the role of state-based affective components in driving SB. The primary aim of the current analysis was to explore the

relationship between individual affects and SB in adult psychiatric outpatients. The secondary aim was to combine the resulting significant individual affects into one or two composite items and test them for protective effects against SB. Methods: Study participants were recruited from Mount Sinai Health System's outpatient psychiatric clinics. All participants were administered the Affective Intensity Rating Scale (AIRS) and the Columbia Suicide Severity Rating Scale (CSSRS). The AIRS is a self-report measure asking the participant to rate the intensity of various positive and negative affects experienced in the last several days and consists of four subscales: Negative Self-Directed Affect, Negative Other-Directed Affect, Positive Self-Directed Affect, and Positive Other-Directed Affect. The CSSRS is an assessment of recent and lifetime suicidal ideation, non-suicidal self-injury, and suicidal behavior. In this analysis, self-harming behavior (SHB) was evaluated in place of suicidal behavior due to a low rate of participants reporting recent suicide attempts. SHB was defined as one or more aborted, interrupted, or actual suicide attempt, or instance of non-suicidal self-injury. Stepwise backwards conditional logistic regression of SHB status on AIRS subscales was performed first, followed by stepwise backwards conditional logistic regression of SHB status on AIRS individual items. Finally, SHB status was logistically regressed on two new composite items. Results: Of the 358 participants, 178 reported recent SI and were included in the analysis. The AIRS scale was internally reliable with a Cronbach's alpha of .867. Only the Negative Self-Directed Affect subscale associated significantly with SHB compared to SI only ($b=.073$, $p<.05$). Four individual items associated with SHB compared to SI only: 'Sadness' and 'Sexual Desire' were significant as positive predictors ($b=.616$, $p<.01$; $b=.337$, $p<.05$), while 'Joy' and 'Fear' were significant as negative predictors ($b=-.388$, $p<.01$; $b=-.283$, $p<.05$). Based on these results, two composite explanatory variables were constructed by subtracting the sum of 'Joy' and 'Fear' from 'Sadness' and 'Sexual Desire', separately, and SHB status was logistically regressed on each. Both composites were significant as positive predictors of SHB ($b=.351$, $p<.01$; $b=.199$, $p<.05$). Conclusion: Among adult psychiatric outpatients presenting with SI, those with high intensity sadness or sexual desire are more likely to engage in SHB, while those with high intensity joy or fear are less likely to do so. Moreover, high intensity joy and fear together moderate the effects of sadness and sexual desire on SHB.

No. 150

Implicit Assessment of Acute Emotional Distress Is Associated With Nonsuicidal Self-Injury Among Psychiatric Patients

Poster Presenter: Kayla DeFazio
Co-Authors: Dorin Levy, Shira Barzilay, Ph.D., Zimri Yaseen, M.D., Igor I. Galynker, M.D., Ph.D., Lisa J. Cohen, Ph.D.

SUMMARY:

Introduction: Nearly 6% of adults in the United States have engaged in nonsuicidal self-injury (NSSI), which is defined as the direct and deliberate destruction of one's own body tissue without suicidal intent (Klonsky, 2011). Trends suggest a recent increase in NSSI, as nearly 20% of adults currently under the age of 30 have engaged in this form of nonfatal self-harm at least once in their lives (Klonsky, 2011). Given the increasing rates of self-injurious behaviors, it is imperative that we improve our ability to identify at-risk individuals. Building on recent work that has utilized implicit measures to improve the prediction of suicidal risk, this study is testing a new coding system for the Thematic Apperception Test (TAT) narrative data, which was developed as an implicit rating of depression and suicide ideation severity, with regard to its sensitivity to NSSI. Methods: Psychiatric inpatients (n=166; ages 18-65) completed the TAT protocol (i.e., Card 3BM and Card 3GF) as a part of a larger study. Two scales, depression and suicidality, from the Comprehensive Assessment of the TAT (CATAT coding system) were scored for TAT Cards 3BM and 3GF. Both dimensions are rated along a 3-point scale. In addition, data on the following clinically relevant information were collected: current psychiatric diagnosis, personality disorder scores, and presence of lifetime or past month NSSI. Results: We compared patients with and without recent and lifetime NSSI on combinations of the TAT scales, borderline personality disorder diagnosis, number of personality disorders, and mood vs. psychotic diagnosis. Analyses revealed that past month NSSI was significantly associated with depression for Card

3GF but not for other variables (F(1,100) = 5.16, p = .025). Lifetime NSSI was significantly associated with borderline personality diagnosis (F(1,188)= 10.85 p =.001) and number of personality disorder diagnoses (F(1,186)= 7.55 p =.007) but not the TAT scales. Conclusion: Consistent with prior research, the results show personality disorder diagnoses, borderline personality disorder in particular, to be a chronic risk factor for lifetime NSSI and state depression to be an acute risk factor. In general, the results of this analysis suggest that the TAT, an implicit test of current mental state, appears to be a valid measure of acute emotional distress.

No. 151

User-Friendly, Evidence-Based Guide Increases Clinician Perceived Competence in Suicide Risk Assessment in Outpatient Psychiatric Settings

Poster Presenter: Michelle Tuyet To, M.D.
Co-Authors: Ana Rodriguez Ozdoba, M.D., Laurie Gallo, Tali Tuvia, Margarita Kats, M.D., Christopher S. Aloezos, M.D.

SUMMARY:

Background Patients at risk for suicide are common in outpatient mental health settings due to the prevalence of psychiatric disorders that carry significant suicide risk [1]. In our current healthcare system, caring for these patients has become increasingly complex and anxiety provoking [2]. Additionally, challenges with suicide risk assessments are more pronounced within the constraints of demanding, high-volume, community mental health clinics with high clinician turnover--a setting that can make already validated instruments, such as the Columbia Suicide Severity Rating Scale, burdensome and unrealistic to use routinely. In the absence of a concise, pragmatic, easily disseminated standardized framework for suicide risk assessment to guide clinicians, it is not surprising that there are significant issues around clinicians' perceived competence in suicide risk assessment [3]. This finding is consistent with results from a survey conducted in our adult outpatient psychiatry clinics that measured clinician's perceived competence in making evidence-based suicide risk assessment. Low perceived competence is especially problematic, as it is crucial to providing quality patient care, and higher perceived competence is associated with improved clinician attitudes toward patients who are at risk for suicide [4]. Methods We created and administered an 8-item Likert scale survey assessing clinician perceived competence of suicide risk assessment to 42 clinicians in two adult outpatient mental health clinics comprised of psychiatrists, psychologists, and clinical social workers. Our measure of perceived competence was operationalized with the following two domains: 1) Clinicians' reported understanding of what defines a high risk patient and 2) Whether their risk level determinations are founded on evidence-based criteria. We developed a suicide risk assessment guide, drawing primarily from Thomas Joiner's interpersonal theory of suicide [5, 6]. The guide is a one-page, user-friendly flowchart that assists with risk level determination (low, moderate, or high) with a series of guided questions drawing from research on suicide risk assessment [5]. Clinicians were trained to use the guide and a post-survey was conducted after three months of implementation. Results Pre- and post- assessment scores found a moderate increase in clinicians' perceived competence following the intervention ($t(41)=3.81$, $p<0.01$, $d=0.59$). This difference was especially reflected in clinicians improved understanding of what defines a high risk patient ($p<0.01$), and increased use of evidence-based criteria ($p<0.01$). Conclusions This present study highlights the prevalence of low perceived competence among various clinicians in suicide risk assessment in the outpatient setting. The findings demonstrate that implementing a brief, user-friendly version of an evidence-based algorithm can improve clinicians' sense of competence by standardizing the definition of a high risk

No. 152

Foreign Body Ingestion: A Sample of 30 Long-Term Adult Psychiatric Inpatients

Poster Presenter: Laura Painter, L.C.S.W.
Co-Authors: Valeriya Yevshayeva, Tierra Sanders, Elizabeth Dimitrios, Lucas Rockwood, Steven Jay Schleifer, M.D.

SUMMARY:

Background: Deliberate foreign body ingestion (FBi) in adults with psychiatric disorders is clinically challenging and potentially lethal. Clinical series of

FBi have been modest in scale and clinical characteristics of such patients require clarification. Due to the morbidity and mortality of FBi, long term psychiatric facilities, such as ours, tend to concentrate patients with FBi. Methods: A clinical summary of patients with FBi in a 550 bed state hospital was undertaken from 2014-2016. Patients with current or past history of deliberate FBi were identified by staff interview and chart/hospital records. History of successful or attempted FBi were confirmed by chart review. Patient characteristics were identified from hospital databases and clinical charts. The large majority of FBi inpatients are believed to have been identified for the interval ending July, 2016. Results: 30 patients with FBi were identified (age 35.1+15.2 [18-64 years], 70% female). 17 showed clinical traits suggestive of borderline personality disorder (BPD) and 15 of a developmental or cognitive disorder. 70% had had multiple completed swallows and 80% required med/surgical procedures. 70% had other self harm behaviors in the preceding 6 months and 60% had a history of alcohol/substance abuse. 80% had a mood or schizoaffective disorder as the primary chart diagnosis (only 10% with schizophrenia or psychosis NOS). At least 83% had a trauma history and 33% a history of legal charges. Medical diagnoses with increased prevalence among FBi patients included obesity (50%), hypothyroidism (47%), asthma (43%), GERD (43%), and neurologic disorders (57%). Clinical review suggested that FBi and other self harm behaviors were reduced in 7 of 10 patients treated with clozapine: 5 of 5 with BPD/mood disorder and no evidence of a comorbid cognitive disorder; 2 of 5 with comorbid cognitive disorders. Affective dysregulation was a common clinical feature (>70%) as was clinical evidence of secondary gain (70%) associated with added clinical attention or medical procedures. Additional preliminary assessments suggested that most FBi events were not preceded by overt agitated behavior, were planned in advance, and were uncommonly (<25%) preceded by hallucinations of any sort. An “infectious” spread of FBi among patients who engaged in FBi and other self harm behaviors was noted. Conclusions: In contrast to children and incarcerated populations, deliberate FBi in adult patients with psychiatric disorders appears most often associated with BPD. Comorbid developmental disability or cognitive disorders are common as is a history of substance abuse or early life trauma. Most of the adult FBI patients in the current psychiatric sample share clinical characteristics with earlier small sample patient series. A role for clozapine in some FBi patients, with effects comparable to that seen with other self harm behaviors, is suggested.

No. 153

Deficits in the Default Mode Network in Major Depressive Disorder With Posttraumatic Stress Symptoms: Resting-State Functional MRI Study

Poster Presenter: Jung Hyun Lee

SUMMARY:

Background: The default mode network (DMN) is involved in internally-focused and stimulus-independent states. Current neuroimaging studies have suggested that altered DMN during resting-state is associated with psychiatric disorders. Numerous task-related neuroimaging studies have been performed in patients with post-traumatic stress disorder (PTSD). However, only a few studies have investigated the relationship between DMN connectivity and post-traumatic symptoms. The aim of this study was to investigate the differences in terms of DMN connectivity at resting-state between patients with major depressive disorder (MDD) exhibiting post-traumatic stress symptoms (PTSS) and those without PTSS. Methods: Participants diagnosed with MDD (n = 53) and healthy controls (n = 42) underwent resting-state functional magnetic resonance imaging (fMRI). Patients with MDD, who had experienced traumatic events and PTSS were defined as the MDD+PTSS group (n = 25, 42.17%). MDD was diagnosed with the Structured Clinical Interview for DSM-5. The severity of PTSS was assessed with the revised version of the Impact of Event Scale (IES-R). fMRI was conducted using a 3.0T Tesla scanner (Philips Ingenia CX, Eindhoven, the Netherlands). The posterior cingulated cortex (PCC) was used as the seed area for the assessment of DMN connectivity across each group. Age, sex, and illness duration were used as covariates to control for group differences in PCC connectivity. Results: Demographic characteristics including age, and education were not different among groups. The mean IES-R score was 50.11±18.88 in the MDD+PTSS group. Patients in this group showed increased

connectivity in the right middle frontal gyrus (T_{max} = 4.74, uncorrected p<0.001) and left putamen (T_{max} = 4.46, uncorrected p<0.001) compared to the healthy controls. An increased connectivity in the right amygdala (T_{max} = 4.79, uncorrected p<.001) and left caudate (T_{max} = 4.72, uncorrected p<0.001) was found in the MDD+PTSS group compared to the MDD group. Altered DMN Connectivity between MDD+PTSS and MDD were significantly correlated with the severity of PTSS (right amygdale, r=0.45, p<0.001; left caudate, r=0.59, p<0.001). Conclusions: The present study is the first to investigate the resting-state DMN connectivity among MDD patients with PTSS, those without PTSS, and healthy controls. We conclude that the deficits in DMN connectivity, detected in the basal ganglia and amygdala, might be the result of post-traumatic stress rather than depression. These findings may contribute to a better understanding of the neurobiological mechanism of PTSD.

No. 154

Pokémon Go: A Potential Tool for Mental Health?

Poster Presenter: Michael Van Ameringen, M.D.
Co-Authors: William Simpson, Jasmine Turna, Beth Patterson, Katrina Pullia

SUMMARY:

BACKGROUND AND AIMS Pokémon Go (PG) is a game played via a Smartphone application, where users have to walk around outdoors to “catch” Pokémon. The game harnesses the GPS and cameras on the player’s device. There are Poké-Stops set up at various locations in a particular area, where players can gather to obtain virtual items such as Pokéballs, potions, or berries which will enable them to catch further Pokémon. Players are also able to obtain “Pokémon eggs”, and in order to hatch the eggs, players are required to walk for several kilometres. The game, therefore involves both physical activity as well as social, face-to-face interactions with other players. Since its launch in the Spring of 2016, Pokémon Go has become a phenomenon, particularly for teens and young adults, who are the highest users of the App. This age group has historically been very difficult to engage in behavioural treatments for depression and anxiety disorders. Although the game was not designed to be a mental health app, early reports indicate that it may be working that way, with anecdotal reports of both mental health benefits [1,2]. The purpose of this study was to retrospectively examine whether use of the game has resulted in changes in mood and anxiety symptoms. METHODS A survey was posted on the MacAnxiety Research Centre’s website. Consenting participants completed the survey regarding use of PG, provided demographic information and mental health history. RESULTS The survey was completed by 205 respondents; 152 reported playing PG. The mean age of this sample was 20.0±7.4 years, and the sample was 57% white; 78% female; 89% single and 62% were full-time students. They had played PG for 13±11.1 weeks, and spent a mean of 7.1±7.7 hours/week (range 0-40 hrs) playing PG. One third of the sample (33%) reported changes in social behaviour since they started playing PG. Within this group, 85% spoke to more unfamiliar people, 76% spent more time with friends, 41% made new friends while playing PG, 51% reported that PG increased their physical activity; 12% reported a weight change (-5.3±-7 lbs); and 29% reported an improved sense of well-being. Players spending >10 hrs/week playing PG (n=23) were more likely to report sleeping less (30%vs.9%, p=.005), spending less time at work (61%vs.27%, p=.007), increased physical activity (70%vs.46%, p=.04) and an improved sense of well-being (43%vs.22%, p=.014) vs. those playing ?10 hours/week. Those with a history of mental health treatment (n=35) spent more time playing (2.6±4.8 hrs/week vs. 1.2± 3.2 hrs/week;p=.016) than those without previous mental health treatment. CONCLUSIONS Playing Pokémon Go was associated with increases in physical activity and social behaviour and an improved sense of well-being, highlighting its potential as a behavioural activation and exposure tool for mental health treatment.

No. 155

Anxiety and Depressive Symptoms: Prevalence in a Canadian Medical Cannabis Use Cohort

Poster Presenter: Michael Van Ameringen, M.D.
Co-Authors: William Simpson, Jasmine Turna, Beth Patterson, Philippe Lucas

SUMMARY:

Purpose: Anxiety disorders are chronic conditions with a lifetime prevalence of 31.6%. Although first-

line pharmacological and psychological treatments have demonstrated efficacy, 40–60% of patients continue to have residual, impairing symptoms. Given these limitations, people have sought alternative treatments. Cannabis is commonly used recreationally for its euphoric and relaxing effects. Although considered an illicit substance in many parts of the world, several jurisdictions have allowed its use for medical purposes. The purpose of this study was to examine the prevalence of medical cannabis use for anxiety symptoms and to explore the characteristics of individuals using medical cannabis to treat anxiety. Method: A sample of individuals who are being prescribed medical cannabis completed an online survey in either English or French. Respondents completed demographic information as well as several self-report scales and details of their use of cannabis to treat anxiety and depression. Questionnaires included the GAD-7, the Patient Health Questionnaire (PHQ-9), the mini Social Phobia Inventory as well as screening questions for panic disorder and agoraphobia, based on DSM-5 criteria. Results: In total, 2032/3405 completed responses with a verified user number were collected. Of the total sample, 888(43.7%) reported using cannabis for anxiety symptoms and completed all psychometric screening instruments. The majority of respondents were male (58.2%), married (36.1%), living in an urban area (43.6%) with a college education (32.2%). Based on screening scale cut scores, rates of probable anxiety and depressive disorders were high (GAD: 45.6%, Social Anxiety Disorder: 42.4%, Major Depression: 25.7%, Panic: 4.7%). In total, 63.4% met screening criteria for ? 1 disorder. Most (92%) felt that cannabis improved their anxiety symptoms with 61% reporting that cannabis had completely replaced a drug prescribed to them by their physician. Most respondents (42%) reported using 1-2g of cannabis per day; 35% used <1 g/day; 23% used ?3g/day. The severity of anxiety (GAD-7, $p<0.001$) and depressive (PHQ-9, $p<0.001$) scale scores was positively associated with the amount of cannabis used/day. Post-hoc comparisons revealed that high users (> 3g/day) had significantly higher scores than moderate (1-2g/day) or low users (<1g/day) (GAD-7,$p<0.01$, PHQ-9,$p<0.01$). No differences were observed between low and moderate users. Conclusion: Nearly half of the sample reported using prescribed cannabis to treat anxiety symptoms and nearly 2/3 met screening cut scores for a diagnosis of an anxiety disorder or major depressive disorder. The vast majority felt that cannabis had improved their symptoms and denied symptoms suggestive of cannabis use disorder. Anxiety and depressive symptoms scores were higher in individuals smoking 3 g or more of cannabis per day.

No. 156

Exploring *Inside Out*: How Patient and Family Attitudes About Mental Illness, Therapy, and Treatment Can Be Shaped by Contemporary Films

Poster Presenter: Kalliopi S. Nissirios, M.D.
Co-Authors: Nicole A. Guanci, M.D., Hanan Khairalla, M.D.

SUMMARY:

The term “cinema or film therapy” was first used in 1990 by L. Berg-Cross, P. Jennings, and R. Baruch, who defined the technique as a form of therapy in which a therapist selects films relevant to a patient’s areas of concern. Since then, film therapy has been widely used in many areas of psychotherapy, especially group and family therapy. Recent literature has also mentioned the therapeutic gain of this new form of therapy aiding patients in learning more about themselves and their maladaptive patterns of handling emotions and relationships, offering tools for adaptively coping with stress and adversity or even offering profound emotional experiences and opportunities for deeper social connections. The use of film in therapy can provide a less overwhelming way to talk about feelings, as it allows people to explore concerns indirectly by relating them to those of characters in the film. In the movie “Inside Out,” the animation film company for this movie consulted with two of the leading scholars on emotion, Paul Ekman and Dacher Keltner, to ensure that the movie portrayed emotions accurately. The collaboration between the movies writers and these two leading experts on emotions helped distill complex concepts from neuro anatomy and personality psychology into accessible and fun characters. Loss, sacrifice, personal growth, coping strategies, value of all feelings are only some of the counseling themes that are derived from this movie. In this poster, we plan

to discuss the therapeutic benefits of using film in psychotherapy, especially children's and family therapy. Specifically, we plan to discuss how Pixar's movie "inside Out" can be used as a therapeutic tool for clinicians to use with children to help them and their parents understand their inner experiences. We will also discuss implications for generalizing the use of this movie's exploration of emotions as a tool for certain populations of adult patients.

No. 157

Efficacy of Repetitive Transcranial Magnetic Stimulation in the Treatment of Refractory Depression Among Patients With Borderline Personality Disorder

Poster Presenter: Hyewon Lee, M.D., M.Sc.

SUMMARY:

Background: Borderline Personality Disorder (BPD) patients have a high lifetime prevalence of Major Depressive Disorder (MDD).However, it has been previously found that there are poorer outcomes of ECT and antidepressants among this population. Repetitive transcranial magnetic stimulation (rTMS) is an emerging treatment for medication-resistant depression with proven efficacy. In the present study we looked at the efficacy of dorsomedial prefrontal cortex (dmPFC) rTMS in treatment resistant MDD co-occurring with BPD. Methods: 20 patients meeting the diagnostic criteria for MDD with a current major depressive episode and co-occurring BPD were recruited. Subjects were randomized to receive either 15 days of twice-daily 20 Hz rTMS treatment of the dmPFC then 15 days of sham rTMS therapy, or vice-versa, in a cross-over design. Primary outcome was reduction in depressive symptoms as measured by Hamilton Rating Scale for Depression (HRSD), which was administered on a weekly interval by a trained research staff blinded to treatment arm. A repeated measures ANOVA was conducted that examined the effect of group allocation and actual treatment received on HRSD score. Results: 80% of patients in both groups completed the study, with 1 SAE unrelated to the treatment. There was a statistically significant interaction between the effects of allocated group and treatment received on HRSD score over time, $F(3,84)= 4.169$, $p=.008$. Conclusions: Our findings support dmPFC rTMS as a potential treatment for MDD in patients with BPD. The treatment was well tolerated. Limitations include small sample size and the crossover design of the study. Further replication with larger sample size and adequate washout period is warranted.

No. 158

The Effect of Treatment Expectation Across Different Psychiatric/Medical Conditions and on Drug Efficacy

Poster Presenter: Jonathan Dang
Co-Authors: Brigitte Vanle, Ph.D., Waguih W. Ishak, M.D.

SUMMARY:

Recent evidence suggests that patients' expectations can have a large influence on treatment outcomes and drug efficacy (1). The effectiveness of a pharmacological treatment is measured by its therapeutic benefit and adverse effects: However, it has been long recognized that an individual's beliefs and expectations can significantly influence the improvement (placebo effect) or worsening (nocebo effect) in response to even an inactive compound (2). This suggests that any drug treatment encompasses physiological and psychological components. For example, in depression, the mechanisms of a placebo treatment caused metabolic changes in different brain region associated with clinical response; in Parkinson's disease, positive expectation induced release of dopamine in the striatum and changes of firing pattern of subthalamic nucleus neurons; in pain, positive expectation induced activation of endogenous opioids (3). Furthermore, there have been reports on the positive and negative expectancy effects on the analgesic efficacy of the opioid. For example, positive treatment expectancy substantially enhanced the analgesic benefit. In contrast, negative treatment expectancy abolished opioid analgesia. These subjective effects were substantiated by significant changes in the neural activity in the brain confirmed by fMRI (4). This review will provide an integrated model of patients' expectations in health outcomes and promote optimal patient-doctor interactions, and effective management of symptoms across different psychiatric and medical conditions.

No. 159

Humanistic Stories and Resident Wellness: A Missing Connection?

Poster Presenter: Jane P. Gagliardi, M.D.
Co-Author: Tony V. Pham, M.D.

SUMMARY:

Background: Addressing resident burnout is an important priority in medical education. A variety of factors can contribute to burnout, which is characterized by a sense of detachment, emotional exhaustion and a blunted sense of accomplishment. These factors can contribute to decreased resident wellness as well as detrimental impacts on patient safety. While ACGME work hour regulations have been associated with some impact on burnout, other factors still play a role. Being a trainee in a large and complex program may contribute to feelings of disconnection institutionally and interpersonally. The purpose of this quality improvement project was to highlight stories of humanity and inspiration in hopes of improving trainee wellness and morale. Methods: During the fall of 2017 Duke psychiatry residents were sent pre-intervention surveys assessing feelings of disconnect, perceptions of the relationship between disconnect and quality of work, and opinions regarding whether and how stories of human interest might influence these issues. Responses demonstrated sufficient resident buy-in to begin the intervention. All members from various psychiatry clinical sites and offices were offered the opportunity to submit uplifting stories with a purpose of increasing connection in the workplace that would otherwise be difficult to perceive during the day to day work routine. Stories were then shared on a regular basis in the program director's weekly email newsletter. Post-intervention surveys are planned for early 2018. Project-specific surveys, the ACGME survey, Duke's institutional safety survey, and the institutional GME survey will be reviewed from the time periods before and after the intervention.

No. 160

Addressing Psychosocial Challenges Facing Pediatric Primary Immunodeficiency Caregivers During Hematopoietic Cell Transplantation

Poster Presenter: Jennie Yoo
Co-Authors: Katherine Ort, Veronica Yank, Morton Cowan, Christina V. Mangurian, M.D.

SUMMARY:

Background: Caregivers of children with primary immunodeficiency disorders (PIDs) experience significant psychological distress during their child's hematopoietic cell transplantation (HCT) including elevated rates of depression, anxiety, and post-traumatic stress disorder in subsequent years. This study aims to better understand caregiver challenges and identify healthcare system-level improvements to enhance caregiver well-being. Methods: In this mixed-methods study, caregivers of children with PIDs were contacted in August to November 2017 via electronic mailing lists of rare disease consortiums and foundations. Caregivers were invited to participate in an on-line survey assessing sociodemographic variables, child's medical characteristics, psychosocial support use, and WHO-5 Well-Being Index. Open-ended questions about healthcare system improvements were included. Informed consent was obtained electronically and the study was exempted from UCSF IRB approval. Descriptive statistics and linear multivariate regression analyses were conducted. A grounded theory approach using the constant comparative method was used to code responses and identify emergent themes. Results: Among the 80 caregiver respondents, caregivers had a median age of 34 years (range 23-62 years), were predominantly female, white, and married with male children diagnosed with Severe Combined Immune Deficiency. In the adjusted regression model, lower caregiver well-being was significantly associated with lower household income and medical complications. Challenges during HCT include maintaining relationships with partners and the child's healthy sibling(s), managing self-care, disrupted sleep, coping with feelings of uncertainty, and feeling unprepared for discharge. Caregivers suggested several organizational-level solutions to enhance psychosocial support including respite services, acknowledgment of psychological distress by healthcare team, connections to other PID caregivers, providing bedside counseling, and accessing financial assistance. Conclusion: Certain high-risk sub-populations of caregivers may need more targeted psychosocial support to reduce long-term impact of the HCT experience upon their well-

being. Caregivers suggested several organizational-level solutions for provision of this support.

No. 161

Functional Characteristics of Brain Reward Circuitry in Altruistic and Self-Oriented Reward Processing

Poster Presenter: June Kang
Co-Authors: Byung-Joo Ham, Ji Won Kang, Woo Young Kang, Aram Kim, Gonju Shim, Hyungkyu Ham

SUMMARY:
Helping others benefits the giver via experiencing well-being (Dunn, Aknin & Norton, 2008), and better mental health (Schwartz et al., 2003). Although the brain mechanism of reward processing has been studied extensively, little is known of the reward from helping others. Several behavioral studies suggest that spending money for others promotes more happiness compare to self-oriented usage (Dunn et al., 2008, Rudd et al., 2014). According to previous studies, the neural representations of reward are highly overlapping between primary to more abstract or social ones (Lin et al., 2011, Saxe & Haushofer, 2008). Therefore it can be hypothesized that altruistic reward will show greater neural response or it last longer. To test the hypothesis, 27 participants with experience of donation or volunteer service to certain charity organizations during last year finished simple RT task during fMRI scan. In each trial, participants will get money for themselves or the charity organization they emotionally involved (regular donation or volunteer service). Each trial starts with the information about who they are playing for in the trial. In the following RT task, the participants were instructed to press the button as fast as possible. The feedback is provided in three reward steps (0-100-500 KRW) in pre-defined sequence. The manipulation check result indicates any participants noticed the feedbacks were independent from their actual RT. It is hypothesized that other-oriented reward will less habituated in compare to self-oriented reward. Region-of-Interest analysis was performed mainly focusing reward and value areas in MANCOVA design- Condition (Self / Other) x Reward Size (0, 100, 500 KRW) x Repetition (10 trials). The difference in hemodynamic response was observed in right amygdala and orbitofrontal cortex. The result was discussed in the context of the commonality and distinctiveness between reward for oneself and others.

No. 162

The Influence of the Anaesthesia-to-Stimulation Time Interval on Seizure Quality Parameters in Electroconvulsive Therapy

Poster Presenter: Anders Jorgensen

SUMMARY:
Background: Electroconvulsive therapy (ECT) continues to be the most efficacious treatment for severe depression and other life-threatening acute psychiatric conditions. Treatment efficacy is dependent upon the induced seizure quality, which may be influenced by a range of treatment related factors. Recently, the time interval from anesthesia to the electrical stimulation (ASTI) has been suggested to be an important determinant of seizure quality. Methods: We measured ASTI in 73 ECT sessions given to 22 individual patients, and analyzed its influence on five seizure quality parameters (EEG seizure time, power, coherence, postictal suppression, and peak heart rate). Results: Longer ASTI was significantly associated with higher peak heart rate during the seizure (p=0.003). After adjustment for confounders, the association continued to be significant, even after Bonferroni correction for multiple comparisons (p=0.005). ASTI was not significantly associated with other seizure parameters. Limitations: The relatively low number of sessions may lead to false negative findings. The study did not include clinical outcomes. Conclusions: Longer ASTI is associated with higher peak heart rate; a phenomenon which is thought to reflect better seizure propagation to subcortical areas of the brain. The finding indicates that delay of stimulation after anesthesia could be a simple way of improving seizure quality and thereby the clinical effect of ECT.

No. 163

All-Cause Mortality of Treatment-Resistant Depression Patients: A Retrospective Observational Analysis in the U.S.

Poster Presenter: Gang Li
Co-Authors: Qiaoyi Zhang, M.D., Carmela Benson, Lena Brandt, Philip Brenner, Johan Reutfors, Robert Bodén, Allitia DiBernardo, M.D.

SUMMARY:
Patients with major depressive disorder (MDD) who fail to achieve remission after 2 antidepressant (AD) medication treatments are said to have treatment resistant depression (TRD). Although they represent up to 35% of MDD patients, the mortality risk of TRD patients relative to other MDD patients has not been well assessed. Methods: This is a retrospective cohort study from Optum Clinformatics trade; Extended, a US claims database that includes patient-level all-cause mortality. Patients aged =18 years who had no prior antidepressant AD dispensings joined the study cohort when they first were dispensed an antidepressant (AD) between 01/01/2008 and 30/09/2015 and 1) had an MDD diagnosis according to the UnitedHealthcare within 30 days of that dispensing and 2) were continuously enrolled for medical and pharmacy benefits throughout the prior 6 months. The date of cohort entry was the index date. Those who, after two AD regimens of adequate duration (28-180 days), started a third AD regimen were classified as having TRD and their TRD index date was the start date of the third regimen. The mortality comparison of TRD to non-TRD patients was conducted using the proportional hazards model with TRD status treated as a time-varying covariate, adjusting for the following covariates evaluated at the cohort entry date: the calendar year, age, gender, depression diagnosis, substance abuse diagnosis, psychiatric comorbidity (diagnosis of anxiety, post-traumatic stress disorder, or personality disorder), and Charlson Comorbidity Index (CCI). Results: Among 355,942 pharmacologically treated MDD patients the mean age was 45 years, 38% were males, 37% had a psychiatric comorbidity diagnosis, 3.0% had a substance abuse diagnosis, the mean CCI was 0.17, and 34,176 (9.6%) developed TRD. TRD was associated with a significantly higher risk of mortality than non-TRD, hazard ratio [95% CI]: 1.3 [1.22-1.38], p-value <0.0001. Conclusion: TRD was associated with an increased risk of all-cause mortality. An effective TRD treatment strategy could potentially reduce the associated mortality risk.

No. 164

TMS for Major Depressive Disorder in Clinical Practice: The First 1,000 Patients in the NeuroStar Outcomes Registry

Poster Presenter: Karen Heart
Co-Authors: Kimberly K. Cress, M.D., David Brock

SUMMARY:
Background: NeuroStar Transcranial Magnetic Stimulation (TMS) is an effective acute treatment for patients with major depressive disorder (MDD). In order to further understand use of the NeuroStar TMS in a clinical setting, Neuronetics has established a patient treatment and outcomes registry to collect and analyze utilization information on patients receiving treatment with the NeuroStar. Methods: Individual NeuroStar providers are invited to participate in the registry and agree to provide their de-identified patient treatment data. The NeuroStar has an integrated, closed electronic data management system (TrakStar) which allows for the data collection for the registry to be automated. The data collected for the registry include Demographic Elements (age, gender), Treatment Parameters, and Clinical Ratings. Clinical assessments are: Clinician Global Impression - Severity of Illness (CGI-S) and the Patient Health Questionnaire 9-item (PHQ-9). De-identified and encrypted patient data is uploaded to a secure data server; an independent statistical service then analyzes and reports the data monthly. Results: Over 1000 patients have entered the NeuroStar Outcomes Registry since Sept 2016. Mean patient age: 47.5 (SD±15.9); 65% were female. Baseline PHQ-9, mean 19.2 (SD±4.8.) End of Acute, PHQ-9 mean 8.9 (SD±6.5.) Overall PHQ-9 response rates and remission rates were 61%/31% respectively. CGI response and remission rates were 75%/56%. The average treatment duration was 33 sessions. Conclusions: This is the largest post marketing registry of outcomes for the use of TMS for patients with MDD in real world clinical practice. For the first 1000 patients in the NeuroStarthis Outcomes Rregistry, approximately 2/3 of patients achieve response and 1/3 of patients achieve remission with a single acute course of NeuroStar TMS. The use of an integrated data management system makes large scale data collection feasible. The NeuroStar OutcomesThis Rregistry is ongoing, and expected to reach 6000 outpatients from more than 47 clinical sites in 36 months. This Registry was supported by funding from Neuronetics, Inc.

No. 165

Altered Cortical Functional Network in Major Depressive Disorder: A Resting-State Electroencephalogram Study

Poster Presenter: Seung-Hwan Lee

Co-Author: Young Myo Jae

SUMMARY:

Electroencephalogram (EEG)-based brain network analysis is a useful biological correlate reflecting brain function. Sensor-level network analysis might be contaminated by volume conduction and does not explain regional brain characteristics. Source-level network analysis could be a useful alternative. We analyzed EEG-based source-level network in major depressive disorder (MDD). Resting-state EEG was recorded in 87 MDD and 58 healthy controls, and cortical source signals were estimated. Network measures were calculated: global indices (strength, clustering coefficient (CC), path length (PL), and efficiency) and nodal indices (eigenvector centrality and nodal CC) in six frequency. Correlation analyses were performed between network indices and symptom scales. At the global level, the patients with MDD showed decreased strength, CC in theta and alpha bands, and efficiency in alpha band, while enhanced PL in alpha band. At nodal level, eigenvector centrality of alpha band showed region dependent changes in MDD and were positively correlated with depression and anxiety scores. Nodal CCs of alpha band were reduced in MDD and were negatively correlated with depression and anxiety scales. Disturbances in EEG-based brain network indices might reflect altered emotional processing in MDD. These source-level network indices might provide useful biomarkers to understand regional brain pathology in MDD.

No. 166

Clinical Utility of Pretreatment Body Mass Index in Antidepressant Treatment Selection: Findings From CO-MED Trial

Poster Presenter: Manish Kumar Jha, M.B.B.S.

SUMMARY:

Background: Currently, there are no valid clinical or biological markers to personalize treatment of depression. Recent evidence suggests that body mass index (BMI) may guide selection between antidepressant medications with different mechanisms of action. Methods: Combining Medications to Enhance Depression Outcomes (CO-MED) trial participants with BMI measurement (n=662) were categorized as normal- or under-weight (<25), overweight (25-<30), obese I (30-<35), and obese II+ (=35). Logistic regression analysis with remission as the dependent variable and treatment arm-by-BMI category interaction as the primary outcome was used to evaluate if BMI differentially predicted response to escitalopram (SSRI) monotherapy, bupropion-escitalopram combination, or venlafaxine-mirtazapine combination, after controlling for gender and baseline depression severity. Results: Remission rates among the three treatment arms differed on the basis of pre-treatment BMI (chi-square=12.80, p=0.046). Normal- or under-weight participants were less likely to remit with bupropion-SSRI combination (26.8%) than SSRI monotherapy (37.3%, number needed to treat or NNT=9.5) or venlafaxine-mirtazapine combination (44.4%, NNT=5.7). Conversely, obese II+ participants were more likely to remit with bupropion-SSRI (47.4%) than SSRI monotherapy (28.6%, NNT=5.3) or venlafaxine-mirtazapine combination (37.7%, NNT=10.3). Remission rates did not differ among overweight and obese I participants. Limitations: Secondary analysis, higher rates of obesity than general population. Conclusions: Antidepressant selection in clinical practice can be personalized with BMI measurements. Bupropion-SSRI combination should be avoided in normal- or under-weight depressed outpatients as compared to SSRI monotherapy and venlafaxine-mirtazapine combination, and preferred in those with BMI=35.

No. 167

Agreement Between Self-Reported and Clinician-Rated Measures of Depression Severity Before and After Treatment With Adjunctive Brexpiprazole

Poster Presenter: Ross Baker

Co-Authors: Peter Zhang, Stine R. Meehan, Catherine Weiss

SUMMARY:

Objective: To evaluate the level of agreement between clinician-rated (CR) and self-reported (SR) measures of depression severity before and after

treatment with brexpiprazole adjunctive to antidepressants, and to investigate if anxiety influences the level of agreement. Methods: We pooled data from two double-blind, randomized, placebo-controlled, 6-week studies (Pyxis; NCT01360645 and Polaris; NCT01360632), assessing the efficacy of brexpiprazole adjunctive to antidepressants in major depressive disorder. Patients receiving brexpiprazole 2mg/day (N=175), 3mg/day (N=213), or placebo (N=381) were included in the analysis. Differences between CR (Montgomery-Åsberg Depression Rating Scale [MADRS]; Hamilton Rating Scale for Depression [HAM-D_{17}]) and SR (Inventory of Depressive Symptomatology-Self-Rated [IDS-SR]) scale scores were used to determine concordance between CR-SR ratings. Pearson correlation coefficients (r) and Cohen's kappa (κ) statistics were used to evaluate the relationship between CR-SR scores at baseline and Week 6, and CR-SR measures of response at Week 6, respectively. The effect of baseline anxious distress (defined as in McIntyre et al., J Affect Disord. 2016; 201:116-23) or anxious depression (HAM-D_{17} anxiety-somatization subscale score ≥7) was investigated. Results: Patients with baseline anxious distress appeared more severely ill than patients without, as reflected by higher baseline MADRS, HAM-D_{17}, and IDS-SR total scores. The CR-SR scale level of agreement increased from a moderate positive correlation at baseline (MADRS: r=0.55; HAM-D_{17}: r=0.57) to a strong positive correlation at Week 6 (MADRS: r=0.72; HAM-D_{17}: r=0.74). Anxious distress did not appear to impact the correlations. The proportion of patients in agreement with clinician at Week 6 regarding change from baseline in CR-SR scales scores was higher for patients without anxious distress than for patients with. A higher proportion of patients with anxious distress than patients without, over-reported their change in depression severity from baseline to Week 6 in comparison with the clinician; the proportion of under-reporters was the same for patients with and without anxious distress. CR-SR scale agreement for response at Week 6 was moderate (MADRS: κ=0.53; HAM-D_{17}: κ=0.56) and unaffected by anxious distress. Data for patients with and without anxious depression were supportive of all analyses above. Patients rating their depression at baseline as less severe than the clinician were significantly more likely to respond to treatment than over-reporters (MADRS: odds ratio [OR]=2.88, 95% confidence interval [CI]: 1.39-5.96; HAM-D_{17}: OR=3.37, 95% CI: 1.56-7.26). Conclusion: There was moderate CR-SR scale agreement on depression severity at baseline and response at Week 6. Under-reporters were more likely to respond to treatment. Anxiety was associated with over-reporting of change in depression severity from baseline to Week 6 by the patients.

No. 168

Efficacy and Safety of Brexanolone IV in Hummingbird 202B: A Double-Blind, Placebo-Controlled Phase 3 Study in Severe Postpartum Depression

Poster Presenter: Samantha E. Meltzer-Brody, M.D.
Co-Authors: Stephen Kanes, Robert Alan Riesenberg, M.D., C. Neill Epperson, M.D., Kristina M. Deligiannidis, M.D., David Russell Rubinow, M.D., Haihong Li, Christine Clemson, Helen Colquhoun

SUMMARY:

Background: Postpartum depression (PPD) is a serious mood disorder, and in the US, estimates of new mothers identified with PPD each year vary by state from 8-20% with an overall average of 11.5%. However, there is no pharmacotherapy specifically indicated for PPD. Brexanolone iv (USAN; formerly SAGE-547 injection) is a proprietary intravenous formulation of allopregnanolone, a neuroactive steroid which is a positive allosteric modulator of γ-aminobutyric acid A receptors ($GABA_AR$) and has previously shown reduction in measures of depressive symptoms in earlier PPD clinical studies. The current study (NCT02942004) is one of two randomized, double-blind, placebo-controlled Phase 3 studies that evaluated the efficacy and safety of brexanolone iv in women with PPD. Methods: This multicenter trial included female subjects ages 18-45 years and ≤6 months postpartum at screening. Enrollment required a diagnosis of PPD (i.e., a major depressive episode diagnosis no earlier than the third trimester and no later than the first 4 weeks following delivery) and a 17-item Hamilton Rating Scale for Depression (HAM-D) score ≥26. Subjects were randomized 1:1:1 to receive brexanolone iv 90 µg/kg/hour, brexanolone iv 60 µg/kg/hour, or placebo. Treatment was administered as a

continuous inpatient infusion for 60 hours. HAM-D, adverse events (AEs), and other efficacy and safety parameters were assessed through Day 30. The primary endpoint was the change from baseline in HAM-D total score at 60 hours. Results: 122 subjects were enrolled and received study drug. At Hour 60, treatment with brexanolone iv 90 µg/kg/hour resulted in a significant mean reduction in HAM-D total score of 17.7 points from baseline compared with 14.0 points with placebo (p=0.0252). Treatment with 60 µg/kg/hour brexanolone iv produced a significant mean reduction in HAM-D total score of 19.9 points versus placebo (p=0.0013). In the brexanolone iv groups, reductions in HAM-D total score were first observed at 48 hours, and the effect at 60 hours was maintained at the 30-day follow-up. Additionally, there were improvements in the Clinical Global Impression-Improvement scale (CGI-I) at Hour 60 (p=0.0095 for 90 µg/kg/h dose and p=0.0131 for 60 µg/kg/h dose relative to placebo). Brexanolone iv was generally well tolerated, with the common AEs including headache, dizziness, and somnolence. One subject experienced a serious adverse event that did not require hospitalization. Conclusions: These Phase 3 data replicated the rapid and sustained effects observed in earlier studies. These data support a planned 2018 NDA submission seeking approval as potentially the first pharmacotherapy specifically indicated for PPD.

No. 169

Efficacy and Safety of Brexanolone IV in Hummingbird 202C: A Double-Blind, Placebo-Controlled Phase 3 Study in Moderate Postpartum Depression

Poster Presenter: Samantha E. Meltzer-Brody, M.D.
Co-Authors: Stephen Kanes, Robert Alan Riesenberg, M.D., C. Neill Epperson, M.D., Kristina M. Deligiannidis, M.D., David Russell Rubinow, M.D., Haihong Li, Christine Clemson, Helen Colquhoun

SUMMARY:

Background: Postpartum depression (PPD) is a serious mood disorder, and in the US, estimates of new mothers identified with PPD each year vary by state from 8-20% with an overall average of 11.5%. Current therapy for PPD includes psychotherapy and judicious use of antidepressants, but there is no pharmacotherapy specifically approved for PPD. Prior clinical studies of brexanolone iv (USAN; formerly SAGE-547 Injection), a proprietary intravenous formulation of allopregnanolone, a neuroactive steroid which is a positive allosteric modulator of γ-aminobutyric acid A receptors ($GABA_AR$), showed promising results in PPD. The current study (NCT02942017) is one of two randomized, double-blind, placebo-controlled Phase 3 studies that evaluated the efficacy and safety of brexanolone iv in PPD. Methods: This multicenter trial enrolled female subjects, ages 18-45 years and ≤6 months postpartum at screening. Subjects were diagnosed with PPD based on a major depressive episode no earlier than the third trimester and no later than the first 4 weeks following delivery. Subjects had a 17-item Hamilton Rating Scale for Depression (HAM-D) score of 20-25. Subjects were randomized 1:1 to receive brexanolone iv 90 µg/kg/hour or placebo. Treatment was administered as a 60-hour inpatient infusion. HAM-D, adverse events (AEs), and other efficacy and safety parameters were assessed through Day 30. The primary endpoint was the change from baseline in HAM-D total score at 60 hours. Results: 104 subjects were enrolled and received study drug. The primary endpoint was achieved, with a significant mean reduction in HAM-D total score from baseline of 14.2 points at 60 hours (p=0.0160) in the brexanolone iv group compared with a 12.0-point reduction for placebo. Statistical significance was first observed at Hour 48 and sustained through Day 7. The mean reduction from baseline in HAM-D seen at Hour 60 in the brexanolone iv group was maintained at Day 30. Consistent with the primary endpoint, there was improvement in the Clinical Global Impression-Improvement scale at Hour 60 (p=0.0005 vs. placebo). Brexanolone iv was generally well tolerated, and the most common AEs were headache, dizziness and somnolence. One subject experienced a serious adverse event that did not require hospitalization. Conclusions: These Phase 3 data replicated the rapid and sustained effects observed in earlier studies. These data support a planned 2018 NDA submission seeking approval as potentially the first pharmacotherapy specifically indicated for PPD.

No. 170

Quality of Life in Patients With Chronic Depression

and the Impact of a Disorder-Specific Psychotherapeutic Intervention
Poster Presenter: Stephan Köhler

SUMMARY:
Background: Up to 30 % of patients with major depression develop a chronic course of the disorder. Patients with chronic depression (CD) have an earlier onset of depressive symptoms, higher rates of early childhood trauma, higher rates of psychiatric comorbidities and a worse treatment outcome compared to non-CD patients. Here, we investigate the quality of life (QoL) in patients with CD and the impact of the Cognitive Behavioral Analysis System of Psychotherapy (CBASP) a specific psychotherapy for the treatment of CD, on QoL. Methods: 50 patients with CD, high-grade treatment resistance and acute depressive symptoms were included in this naturalistic study. Patients received a 12+4 weeks (inpatient + outpatient) CBASP treatment with a total of 26 single psychotherapy sessions and at least 14 group sessions. The World Health Organization Quality of Life questionnaire (WHOQOL) served as the primary outcome measure for QoL and was applied at admission, discharge and after six and twelve month in a prospective naturalistic follow-up assessment. Results: Patients with CD demonstrated a significantly lower QoL at admission (WHOQOL_Global: 22.79; SD:2.31) compared to a normative sample of healthy controls (WHOQOL_Global: 63.6; p>.05). QoL improved significantly during CBASP treatment (WHOQOL_Global,discharge: 37.5; SD: 3.20; p>.05) and in all domains of the WHOQOL. Lower QoL outcomes were strongly associated with higher age, somatic comorbidities, a recurrent depressive disorder and higher depressive symptoms at admission. At six and twelve month follow-up, the QoL was stable compared to discharge (WHOQOL_Global, 6 month: 38.75; SD: 4.43; WHOQOL_Global, 12 month : 44.23; SD: 4.71). Conclusion: Compared to healthy controls, QoL is significantly lower in patients with CD. CBASP is associated with a QoL improvement that remains stable for up to twelve months. These findings show that CBASP, a specific psychotherapy for CD, has sustainable effects on the patients well-being that go beyond the reduction of depressive symptoms.

No. 171
Using Google to Approximate the Epidemiology of Depression in the United States
Poster Presenter: Shixie Jiang

SUMMARY:
Purpose: Depression is a serious mental health disorder that can manifest itself with disabling mood, cognitive, and physical symptoms. It is associated with higher rates of comorbid medical illnesses and impaired daily functioning. In 2010, the CDC published an analysis of surveys from 2006-2008 that focused on estimating the prevalence of depression in the United States by state. Since then, there has been no recent data. Google Trends is an online tool that enables the examination of the relative search frequency (RSF), on a scale from 0-100, of searches for selected terms. Recently, this tool has been utilized in research studies to examine epidemiological data. Thus, Google Trends may be able to offer insights into any changes that have occurred in the state-wide distribution of depression over the past decade. Methods: Search queries from over 3.5 billion Google searches each day from January 1st, 2008 to January 1st, 2017 were examined. The frequencies of phrases associated with depression and its symptoms were recorded for each state and respective region of the country. Data analysis was completed using ANOVAs and Bonferonni post-hoc t-tests with statistical significance set at $p<0.05$. Results: Based on RSFs per state, West Virginia (100), Wyoming (93), Indiana (89), Maine (89), and Iowa (89) searched for information about depression the most. Oregon (50), Virginia (58), District of Columba (64), California (65), and Florida (67) were the least active states. The mean RSF and standard deviations of each region were calculated: northeast ($M=82.40\pm4.22$), midwest ($M=82.50\pm6.02$), south ($M=76.44\pm10.03$), west ($M=75.46\pm11.17$). ANOVAs and Bonferonni post-hoc t-tests showed no statistically significant differences in RSFs between the regions. Discussion: The 2006-2008 CDC survey on adults meeting criteria for symptoms of depression showed that Mississippi, West Virginia, Alabama, Oklahoma, and Tennessee were the top five states. Based on our results from 2008 - 2017, West Virginia, Wyoming, Indiana, Maine, and Iowa showed the most search activity for

symptoms of depression. It is possible that these states provide better education, making the population more likely to search for information. Conversely, the states that searched the least are areas that could improve upon further education and screening. Our results demonstrated no significant difference between the regions, whereas the CDC data shows more depression in southern states. This may portray an increase in public recognition of depressive symptoms. The limitations of this study include overextrapolation of data and inability to delineate between age groups. Conclusion: Identification of populations at risk for developing depression is an understudied endeavor. The 2010 CDC research provided pertinent epidemiological data; however no duplicate study has been published in the past decade. Although Google Trends provides limited information, it could be

No. 172

Depression and Gap Between Perceived- and Self-Willingness-to-Pay for Labor in Community Dwelling Full-Time Female Homemakers

Poster Presenter: Tae-Young Hwang

SUMMARY:

Background: Labor and mental health of full-time female homemakers are inevitable for the health and maintenance of our society. Labor of full-time female homemakers is comparable to that of career women in our society; nonetheless, the value of labor and the importance of mental health of full-time female homemakers are far from just evaluation and sufficient social concern. This study investigated current state of depression in community-dwelling full-time female homemakers and related factors, and particularly the impact of the gap between socially-evaluated (perceived) and self-evaluated value of labor of full-time female homemakers on depression. Methods: Using structured questionnaires, participants were sequentially enrolled and surveyed in the community targeting full-time female homemakers who have 1 year or over duration of full-time homemaking and were aged 19 to 50 years. Structured questionnaires were composed of general items and Korean versions of Beck Depression Inventory-II (BDI-II), Beck Anxiety Inventory (BAI) and Beck Hopeless Scale (BHS). Additionally, monetary evaluation method through willingness-to-pay (WTP) approach was adopted for the gap between perceived and self-rated values of labor of full-time homemakers. Results: A total of 170 of 180 participants recruited for this study met the inclusion criteria and were analyzed. The mean(SD, standard deviation) of age was 33.86(4.27, year) and the mean(SD) of duration of full-time homemaking was 4.50(3.31, year); average income per month was 325.33(215.31, 10 x thousand Korean Won); the degree of relationship with husband and burden of nurturing which were assessed using visual analogue scale(VAS, range 0 to 10) were 6.72(2.15) and 6.32(2.35), respectively. Also, perceived WTP and self-WTP were 217.47(87.87, 10 x thousand Korean Won) and 236.68(90.24, 10 x thousand Korean Won), respectively. Of 169 participants analyzed for BDI-II, BAI, and BHS, 45% of participants showed mild to severe depression; 39.6% manifested mild-to-severe anxiety; 60.9% were in state of mild-to-severe hopelessness. In multiple regression analysis of factors related to depression of full-time female homemakers, burden of nurturing ($t = 3.99$, $p < 0.001$), average income per month ($t = - 3.24$, $p < 0.01$) and relationship with husband ($t = - 3.03$, $p < 0.01$) were significant. However, the gap between perceived and self-WTP for labor were not statistically significant. Conclusion: The findings of this study showed that full-time female homemakers may be under relatively serious conditions and blind spots in the perspective of mental health, suggesting that sufficient social concern and pertinent political approach are needed for the promotion of mental health of full-time female homemakers. This study was supported by the grant of Insan Research Fund for Psychiatry.

No. 173

Using Self-Reported Functioning Measures to Identify MDD Patients With Impaired Performance-Based Functional Capacity

Poster Presenter: Philip Harvey
Co-Authors: Venkatesha Murthy, Rengyi Xu, Wei Zhong

SUMMARY:

Introduction & Aim In patients with schizophrenia,

levels of impairment on functional capacity (FC) measures are consistently high. However, in patients with MDD, there is a larger group with smaller impairments, meaning that ceiling effects are possible, including in some patients who are employed. Using a performance-based FC measure to select patients entails challenges. First, it is not known how many cases with high FC scores would need to be censored. Second, the possibility of sites influencing baseline FC scores can damage the integrity of the study. In these analyses, we examined the use of a self-reported measure, the Work Limitations Questionnaire (WLQ) to identify patients with greater impairments on FC and evaluated their response to treatment on cognitive measures. Methods In a large-scale depression clinical trial, patients (N=529) were examined with the UCSD Performance-based Skills Assessment, Digit Symbol Substitution Test (DSST) and other clinical measures. UPSA-B scores were derived from two different versions. There were 3 arms in this trial (vortioxetine 10-20mg/d, duloxetine 60mg/d & placebo). Patients who were employed (n=207) completed the WLQ. We examined the score distributions on the UPSA-B, in terms of baseline scores and treatment response, as a function of employment status and WLQ scores. Results Employed patients had higher UPSA-B scores at baseline than unemployed patients (80 vs 77). Among the employed patients, scores of greater than 13 on the WLQ were associated with more impairment on the UPSA-B (78 vs 82). Patients with larger impairments on the WLQ also showed larger treatment-related improvements on the UPSA-B: a 5.4-point improvement on vortioxetine relative to placebo ($p<0.05$), while patients with lower impairments on WLQ had a 1.8-point improvement ($p>0.05$) on the UPSA-B. Further, patients with higher scores on the UPSA-B (85 or higher, within one Standard Deviation of ceiling) at baseline had lower overall improvement on the WLQ with treatment compared to those with <85 scores on baseline UPSA-B: 0.05- vs 1.1-point improvement. Conclusions Employed patients with depression, who have lower levels of disability at baseline, may need additional screening to determine if they are likely to manifest ceiling effects on critical FC outcome measures. A self-reported measure of impairments in vocational functioning, WLQ identified a group of patients with lower scores in performance-based FC measures. These patients also manifested larger overall treatment-related improvement compared to those with higher FC scores. As a result, including patients with WLQ scores >13 may reduce the need for censoring patients because of ceiling effects on FC measure and thus overcome potential loss of study power. In this analysis, employed patients who were also impaired on FC measures showed larger overall treatment response than unemployed patients irrespective of their scores on FC measures.

No. 174

Depression in Schizophrenia: Correlations With Objective and Subjective Quality of Life Outcomes

Poster Presenter: Philip Harvey
Co-Author: Kimberly Vanover

SUMMARY:
Background. Schizophrenia is increasing recognized to be associated with symptoms of depression. As many as 40% of people with schizophrenia (SCZ) have a fully syndromal major depressive episode at some time in their lives and the mean severity of depression in unselected samples is often in the mildly to moderately depressed range (mean BDI score of 11-16). While patients who report no depression have been found to report very low levels of subjective distress, a comprehensive study of the subjective quality of life correlates of depression in schizophrenia has not been performed. Further, given the impact of depression on interpersonal functioning, an assessment of the relationships between depression and social cognition is warranted. Methods. Two samples of patients with SCZ (n's= 179 and 218) were compared to samples of HC (n's= 104 and 154) and were examined with self-reported measures of depression (Beck Depression Inventory-II; BDI), social cognition, and everyday functioning and performed a total of 14 different social cognition performance-based tests. Some of these tests measured attribution bias (AIHQ), while others measured interpersonal sensitivity (PADS, PID5) while others were performance based tests of emotion recognition and perception as well as social inference and theory of mind. Participants were also examined for their speed of completion of the tasks and their

confidence in their accuracy. Patients were also clinically rated with the PANSS. Results. In both samples, SCZ patients were more depressed than HC (15,15, vs. 6 and 6). In both samples of SCZ, BDI scores were correlated with clinical ratings of depression (PANSS item 6: r's=.60 and .61. Performance on tests of emotion recognition and perception, social inference, and theory of mind were not correlated with BDI in either sample. In both samples, higher BDI were correlated with self-reports of more impaired everyday functioning, lower subjective impressions of social cognitive competence, and greater feelings of interpersonal sensitivity, combined with the impression that others were mistreating them. Depression in HC, but not patients, was associated with lower confidence while performing social cognitive tests and depression in SCZ, but not HC, was associated with slower performance on these same tests. Implications. Depressed mood impacts self assessment of abilities and global world views in very similar ways in HC and people with SCZ. These impressions are not due to objective impairments in performance that are associated with depression. In contrast, objective performance on social cognitive tests, like previous studies of the relationship of neurocognition and functional and depression, shows remarkably little overlap with subjective depression. Although the similarity of the relationships between depression, interpersonal sensitivity, and subjective quality of life are similar in HC and SCZ, the more severe depression on the part of the SCZ populations sugge

No. 175

Coronary Artery Calcification and Mortality in Patients With Severe Mental Illness

Poster Presenter: Pirathiv Kugathasan

SUMMARY:

Background Patients with severe mental illness (SMI) have an excess cardiovascular mortality contributing to numerous years of life lost. Mortality from ischemic heart disease has declined in the general population, but this decline has not been observed in patients with SMI. Coronary artery calcification is a clinical predictor of ischemic heart disease, which can be measured by CT-Coronary Angiography (CT-CAG). Coronary artery calcification in patients with SMI has not previously been investigated. We investigated the prevalence of coronary artery calcification and the effects on all-cause mortality in patients diagnosed with SMI compared to controls from the general population. Methods The study included all patients with a CT-CAG registered in the Western Denmark Heart Registry from 1 January 2008 to 31 December 2016. We identified patients with schizophrenia (ICD-10; F20) and bipolar disorder (ICD-10; F30-31) from the Danish National Patient Registry and the Danish Psychiatric Central Research Registry. Primary outcome was all-cause mortality after CT-CAG. Cox proportional hazard regression and Kaplan-Meier estimates were utilized. Results Among 48,757 patients who had a CT-CAG measure, 564 patients (1.2%) had a previous diagnosis of SMI. In general, patients with SMI were significantly younger than the controls and had a much higher rate of cardiovascular risk factors. There were no significant differences in calcium score between controls and patients with SMI. Cox regression analysis revealed a significantly increased hazard ratio for death in patients with SMI. Conclusion Patients with SMI are not demonstrating signs of early coronary artery calcification. However, mortality rates were still markedly higher in patients with SMI, suggesting other contributing factors to death than coronary atherosclerosis in SMI patients.

No. 176

Impact of the Use of Aripiprazole Long-Acting Injection in the Risk of Hospitalization and Emergency Room Visits: A Mirror Image Study

Poster Presenter: Eva Bobadilla Perez

Co-Author: Alejandro Rodriguez Sotelo

SUMMARY:

Background: Schizophrenia and related disorders are chronic diseases that require long term management with antipsychotics. Drug noncompliance in these patients usually increases the risk of recurrence and hospitalization. The use of long acting injectable antipsychotics (LAIAPS) may improve drug adherence. Aripiprazol is the only dopamine receptor partial agonist antipsychotic effective in the treatment of schizophrenia and related disorders . Methods: The aim of this study is to analyze the effects of ALAI on psychiatric hospitalization (number of admissions, bed days) and emergency

room visits. We conducted a naturalistic observational retrospective study using database of adult patients receiving ALAI in our community and they were analyzed by a mirror image study. We identified the number of hospital admissions, the number of hospital bed days and the number of emergency room visits, during a 36 month period before prescribing ALAI; afterwards, we compared the data of both periods of time. Statistical analysis: descriptive variable statistics were used. Test Z was used for the comparison of figures and the McNermar Test for the comparison of paired proportions between groups after-before ALAI, considering statistically significant p-values < 0,05. Results: 88 patients were included in this study (47 male, 41 female). Age mean 41.99 years [min 18-max 77]. Diagnosis: Schizophrenia (53.4%) Schizoaffective D. (21.6%), Bipolar D. (10.2%), Delusional D. (14.8%). 90.9% of our patients had previous antipsychotic treatment and 30% were taking another LAIAPS. The average treatment time with ALAI was fifteen months. Among the 88 patients participating in this study, 79 hospitalizations were counted corresponding to 55 patients (62,5%) within the 36 months previous to the starting of the ALAI treatment; this fact contrast with 4 hospitalizations corresponding to 4 patients (4,5%) following the start of the treatment (Rate of hospitalizations person-year 0,3 vs 0,03 respectively, p<0,05). 59 (67,0%) patients required urgent psychiatric care, which meant 122 consultations within the 36 months previous to the starting ALAI treatment, versus 24 consultations of 12 patients (13,6%) following the starting of the treatment (Rate of person-year: 0,46 vs 0,22 respectively , p<0,05). A statistically significant difference (p<0,05) was also observed between the rate of hospitalization days of patient-year before ALAI and after ALAI (7,3 vs 0,8 respectively). Conclusion: The use of ALAI is associated with a significant reduction in hospital admissions, hospital bed days and emergency room visits. Our results suggest that switching to ALAI is an efficacious strategy to reduce the number of hospital admissions, the number of bed days needed and the emergency room visits. Therefore, we can consider ALAI a therapeutic innovation that can contribute to build wellbeing for patients effects of schizophrenia and related psychosis.

No. 177

The Role of Trait Aggressiveness, Executive Dysfunction, and Psychotic Symptoms for Violence in Schizophrenia and in the General Population

Poster Presenter: Menahem Krakowski

SUMMARY:

Objective Violence in schizophrenia and in the general population has been associated with impairments in three different realms: executive function, psychiatric symptoms, and trait predisposition to aggression, i.e., “trait aggressiveness”. Our goal was to investigate the role of these factors for violent behavior in patients with schizophrenia and compare them to violent patients with no psychotic disorders, non-violent patients with schizophrenia and healthy controls. Method 144 subjects were included in the study: 40 violent (VS’s) and 34 nonviolent (NV’s) patients with schizophrenia, 35 healthy controls (HC’s) and 35 non-psychotic violent subjects (NPV’s). Trait aggressiveness was measured with the Buss-Perry Aggression Questionnaire (BPAQ), executive dysfunction with the Wisconsin Card Sorting Test (WCST) perseverative errors, and psychiatric symptoms with the Positive and Negative Syndrome Scale (PANSS). The Aggression Factor from the Life History of Aggression (LHA) was used as the measure of aggression. It was based on self-report, review of charts and official records of arrests and convictions for violent crime. Drug and alcohol abuse history were also assessed. Results There was an overall difference in trait aggressiveness among the four groups (F=13.9, df=3,141, p<.001); it was more severe in the 2 violent groups than in the 2 non-violent groups (p<.01). There was also an overall difference in WCST perseverative errors (F=14.50, df=3,141, p <.0001); it was more severe in the 2 patient groups than in the HC’s and NPV’s (p<.01). The LHA Aggression factor was strongest in the NPV’s, followed by the VS’s. We investigated the joint role of BPAQ score and WCST perseverative errors in the 4 groups, and, the additional role of positive psychotic symptoms in the patient groups in determining actual aggression (LHA Aggression Factor) in analyses of covariance. The Aggression Factor was significantly associated with the BPAQ score in the VS’s (F=2.77, df=39, p=.01), NPV’s

(F=4.32, df=34, p>.001) and HC's (F=3.69, df=34, p>.001), but only marginally in the NV's (F=1.95, df=33, p=.06). WCST perseverative errors were significantly associated with the Aggression factor in the VS's only (F=2.69 df=34, p=.01), but not in the other three groups. Positive psychotic symptoms were not related to LHA Aggression in the two patient groups. Conclusion The presence of a non-psychotic violent group allows us to disentangle the impact symptoms of the illness from the effects of the other impairments. Trait aggression was the most important contributor to violence in all the groups; impairment in executive control, as indexed by perseverative errors played a role only the violent patient group. This deficit in behavioral regulation interacts with the personality predisposition to aggression. In the non-psychotic subjects, high levels of violence occur even in the absence of any executive dysfunction. This has important implications for treatment.

No. 178

Lumateperone (ITI-007) for the Treatment of Schizophrenia: Overview of Placebo-Controlled Clinical Trials and an Open-Label Safety Switching Study

Poster Presenter: Kimberly Vanover

SUMMARY:

Background Lumateperone is a first-in-class agent in development for schizophrenia that acts synergistically through serotonergic, dopaminergic and glutamatergic systems. Lumateperone is a potent 5-HT2A antagonist, a mesolimbic/mesocortical dopamine phosphoprotein modulator (DPPM) with pre-synaptic partial agonist and post-synaptic antagonist activity at D2, a glutamate GluN2B receptor phosphoprotein modulator with D1-dependent enhancement of both NMDA and AMPA currents via the mTOR protein pathway and an inhibitor of serotonin reuptake. Methods Lumateperone was evaluated in 3 controlled clinical trials to evaluate efficacy in patients with acute schizophrenia. The primary endpoint was change from baseline on the Positive and Negative Syndrome Scale (PANSS) total score compared to placebo. In Study '005, 335 patients were randomized to receive ITI-007 60 mg or 120 mg, risperidone 4 mg (active control) or placebo QAM for 4 weeks. In Study '301, 450 patients were randomized to receive ITI-007 60 mg or 40 mg, or placebo QAM for 4 weeks. In Study '302, 696 patients were randomized to receive ITI-007 60 mg or 20 mg, risperidone 4 mg (active control) or placebo QAM for 6 weeks. Also, an open-label safety switching study was conducted in which 302 patients with stable schizophrenia were switched from standard-of-care (SOC) antipsychotics and treated for 6 weeks with lumateperone QPM and then switched back to SOC. Results In Studies '005 and '301, lumateperone (60 mg ITI-007) met the primary endpoint with statistically significant superior efficacy over placebo at Day 28 as measured by the PANSS total score. In Study '302, neither dose of lumateperone separated from placebo on the primary endpoint; a high placebo response was observed in this study. Across all 3 efficacy trials, lumateperone improved symptoms of schizophrenia with the same trajectory and same magnitude of improvement from baseline to endpoint on the PANSS total score. Lumateperone was well-tolerated with a favorable safety profile in all studies. In the two studies with risperidone included as an active control, lumateperone was statistically significantly better than risperidone on key safety and tolerability measures including prolactin, glucose, lipids and weight. In the open-label safety switching study statistically significant improvements from SOC were observed in body weight, cardiometabolic and endocrine parameters worsened again when switched back to SOC medication. In this study, symptoms of schizophrenia generally remained stable or improved. Greater improvements were observed in subgroups of patients with elevated symptomatology (comorbid symptoms of depression and those with prominent negative symptoms). Discussion Lumateperone represents a novel approach to the treatment of schizophrenia with a favorable safety profile in clinical trials. The lack of cardiometabolic and motor safety issues presents a safe

No. 179

Effect of BI 409306 on Positive and Negative Syndrome Scale in Schizophrenia: A Randomized, Double-Blind, Placebo-Controlled, Phase 2 Trial

Poster Presenter: Michael Sand, Ph.D.

Co-Authors: Kazuyuki Nakagome, Joachim Cordes,

Ronald Brenner, Gerhard Gruender, Richard Keefe, Robert Riesenberg, David Walling, Kristen Daniels, Lara Wang, Kerstine Carter, David Brown

SUMMARY:
Rationale: Patients with schizophrenia may obtain cognitive benefit from treatments targeting dysfunctional glutamatergic neurotransmission. In a trial aimed at testing cognition, BI 409306, a potent and selective phosphodiesterase 9 inhibitor, was administered to patients with chronic schizophrenia. Positive and Negative Syndrome Scale (PANSS) scores were assessed as a safety endpoint. Methods: This was a Phase II, multicenter, double-blind, placebo-controlled, parallel-group study. Patients (18-55 years) with a diagnosis of schizophrenia, maintained on stable doses of antipsychotics, were randomized (2:1:1:1:1) to once-daily placebo or BI 409306 (10, 25, 50, or 100 mg) for 12 weeks (4-week follow-up). The primary endpoint has been reported. Prespecified safety analyses included disease worsening as assessed by PANSS. A post hoc analysis of PANSS data was performed to explore the type of symptoms reported in patients taking BI 409306, compared with those taking placebo, who relapsed and were subsequently hospitalized. An analysis of significant symptom worsening from baseline was carried out according to the following categories: any, >5%, >10%, >15%, and >20% increase in score. Results: In prespecified analyses (treated set: BI 409306, n=343; placebo, n=173), mean scores demonstrated no meaningful change in either PANSS total or subscale scores and no difference between treatment groups. Post hoc analysis of the PANSS positive subscale score demonstrated benefits of BI 409306 (pooled dose groups) over placebo: more patients in the placebo group had significant worsening versus BI 409306 across all categories (any change, 34.4% vs 27.9%; &5% change, 33.8% vs 27.3%;10% change, 21.7% vs 14.1%;15% change, 15.3% vs 7.5%;20% change, 7.6% vs 4.1%). Similar patterns were observed for total score (placebo vs BI 409306: any change, 34.4% vs 31.4%;5% change, 19.8% vs 17.2%;10% change, 10.2% vs 10.0%;15% change, 7.6% vs 5.0%;20% change, 5.1% vs 3.5%) and the psychopathology subscale (placebo vs BI 409306: any change, 35.7% vs 31.7%;5% change, 26.1% vs 23.2%;10% change, 15.9% vs 14.4%;15% change, 10.2% vs 8.2%;20% change, 7.0% vs 3.1%), but not for the negative subscale (placebo vs BI 409306: any change, 32.5% vs 35.4%;5% change, 32.5% vs 31.0%;10% change, 18.5% vs 18.5%;15% change, 10.2% vs 12.9%;20% change, 5.7% vs 8.2%). Conclusions: The percentage of patients showing a worsening of PANSS-positive symptoms was lower with BI 409306 compared with placebo, demonstrating an advantage of BI 409306 over placebo. A similar pattern was also seen for patients experiencing a worsening of overall and general psychopathology symptoms but not for the negative subscale, where no advantage over placebo was noted. Funding: Boehringer Ingelheim (1289.6/NCT02281773)

No. 180

Plasma Brain-Derived Neurotrophic Factor Is Negatively Associated With Interferon Gamma in Patients With Schizophrenia

Poster Presenter: Ganiat Alakiu
Co-Authors: Olaoluwa O. Okusaga, M.D., Elena Dyukova, Seyedmostafa Mansouripour

SUMMARY:
Background: Patients with schizophrenia have low levels of Brain Derived Neurotrophic Factor (BDNF) in the CNS and in the blood. BDNF promotes the survival of neurons in the brain. Plasma proinflammatory cytokines such as interferon gamma (INF-?) have been negatively correlated with cognitive and psychotic symptoms in patients with schizophrenia. It is plausible to hypothesize that the negative impact of proinflammatory cytokines on psychotic symptoms and cognition in schizophrenia may be partly mediated by reducing BDNF levels. The aim of this study is to evaluate the association between INF-? and BDNF in a sample of patients with schizophrenia. Methods: 106 patients with schizophrenia [(mean age 33 (SD 12.3), 30 female and 76 male] diagnosed with the Mini International Neuropsychiatric Interview version 5, were recruited. BDNF and INF-? were detected in fasting plasma using ELISA. Spearman's correlation coefficient was used to evaluate the association between BDNF and INF-? . Results: BDNF and INF-? were negatively correlated with one another (?= -0.35, p=0.01). Conclusions: The results support the notion that the negative impact of proinflammatory cytokines on brain function in schizophrenia may be

partly mediated by reducing BDNF levels. Our finding could be explained by downstream effects of proinflammatory cytokines that produce oxidative stress and consequently alter the expression of trophic factors. A major limitation of this study is the absence of data on CSF/brain levels of BDNF and INF-?. Future studies employing experimental therapeutics paradigm will shed more light on the nature of the association between BDNF and INF-? in schizophrenia.

No. 181

Dissociative Identity Disorder and Schizophrenia–Perspectives From Psychiatry and Psychoanalysis: A Case Report

Poster Presenter: Kuan Chiao Tseng, M.D.

SUMMARY:

The case presented here is of a 36-year-old woman, with whom I worked through psychotherapy for 10 years, with a diagnosis of dissociative identity disorder (DID). At age 24, she first presented to the clinical situation with amnesia, an interrupted sense of time, inability to recognize her family and herself. The symptoms further progressed to multiple personalities, delusional misidentification, and sense perception distortion. She was hospitalized 8 times mostly due to violence associated with a Capgras delusion toward the father. Medical exams were normal. She was also diagnosed with schizophrenia because of her bizarre delusions. Her intelligence does not deteriorate, with fair occupational performance. She has several personalities: a girl who likes nail polishing, an orphan child, a fierce man, etc. She was born in a middle-class family with an identical twin sister. At age 8, she was sexually harassed by a stranger after school. Her mother was ashamed and prevented her from talking about this incident. She recalled that as a teenager, she was also sexually harassed by her father who attempted to expose his genitals to her. The parents had strict rules about her relationship with boys, and she was obedient. At age 20, her first boyfriend lured her into having sex. Then, she suffered from alopecia, episodic amnesia and trance-like states for a year. Psychotherapeutic work started at age 26. She frequently felt and heard people scolding her as a prostitute. She broke up with the first boyfriend at age 27. Thereafter, she devoted herself to work. She tried to date other men, but mostly ended up with a fear of sex. Her psychotic symptoms were all related to sexual scenes. She deeply repressed her inner sexual desire through severe superego criticism. Then, she projected all these inner feelings to people surrounding her. It was others' sexual desires or their blaming her for being lustful, not hers. She denied that her parents could be mean to her. If so, they must be fake and replaced by other souls. They looked the same but were not real. Because sexual or guilty feelings were so strong, she developed amnesia - a total denial of current reality, including her own identity. Even though she presented to the sessions with different personalities, a gap in time sense, and sense perception distortion, the therapy itself worked as a coordinate axis. Psycho-pathogenesis for DID is complicated and associated mostly with childhood sexual trauma. Bizarre psychotic symptoms can occur in DID, so it is often hard to differentiate it from schizophrenia. The current diagnosis classification for mental disorders focuses on phenomena, with less emphasis on the psychoanalytic dimension. Thus, different perspectives lead to different diagnoses and approaches. This patient represents a diverse psychopathology of hysteria presented by Sigmund Freud in the 19th century. Therapy should consider sexual trauma and the unconscious that underlies these symptoms.

No. 182

Hallucinogen Persisting Perception Disorder Following Recreational Dextromethorphan Use

Poster Presenter: Robert Rymowicz, D.O.
Co-Authors: Erin Zerbo, M.D., Pallavi Joshi, D.O., M.A.

SUMMARY:

Introduction: Hallucinogen Persisting Perception Disorder (HPPD) is a rarely diagnosed disorder characterized by continual sensory disturbances following the use of hallucinogenic substances. These disturbances are generally visual and auditory in nature, and include visual snow, floaters, motion trails, palinopsia, halos, and tinnitus. HPPD has been noted to frequently co-occur with Depersonalization/Derealization Disorder, depression, and anxiety. Although HPPD has been reported following the use of various hallucinogens, it is most commonly reported following LSD,

mescaline, or psilocybin ingestion. The cause of HPPD remains unknown, and treatments remain experimental, although case reports have described success with benzodiazepines, tolcapone, carbidopa/levodopa, lamotrigine, and levetiracetam. Case Report: A 20-year-old Caucasian male with a history of ADHD presented to the emergency department endorsing depression, hopelessness, and passive suicidal ideation in the setting of persistent visual disturbances for two years, accompanied by tinnitus, depersonalization, and derealization. Prior outpatient ophthalmology and neurology consults discovered no unusual findings. The patient complained that his symptoms were so severe that he could not study or work. Although he initially denied substance use, he admitted to marijuana, alcohol, and recreational stimulant use after being informed that a diagnosis of HPPD was suspected. He reported experimenting with dextromethorphan (DXM) on three occasions during his freshman year in college. He first used DXM polistirex (Delsym®) in June 2015 at a dose of 300mg, and in September tried 400mg. In March of 2016, the patient used DXM hydrobromide (Robitussin®) gel capsules at a dose of 300mg. He experienced a panic attack along with acute paranoia that a friend was advancing on him sexually, which led him to sprain his ankle as he fled. His HPPD symptoms developed over the next week, reaching a peak several months later and persisting unchanged since then. The patient complained of depersonalization and derealization, visual snow, halos, after images, floaters, and tinnitus. He experienced visual snow in three dimensions, scintillating and changing in depth. After an MRI and EEG revealed no pathology, the patient was titrated on lamotrigine to 100mg BID, resolving his depersonalization and derealization but had no effect on his visual symptoms. Clonazepam 1mg daily was added, leading to a more than 50% reduction in visual snow, with a noted decrease in scintillation and movement. He also noted a 50% reduction in tinnitus, and a slight decrease in floaters. He reported that halos and after images were not affected. Next, ropinirole 0.25mg TID was added, with a resultant 75% reduction in after images. However, the patie

No. 183

A Structural MRI Study of the Anterior Cingulate Cortex in Individuals With Depressive Symptoms
Poster Presenter: Hisham Mohsen Ibrahim, M.D.

SUMMARY:
Several magnetic resonance imaging (MRI) studies have reported significant reductions in anterior cingulate cortex (ACC) volume in people with major depressive disorder (MDD), but these studies were generally small in size which limited their generalizability. Furthermore, few MRI studies did not report significant ACC volumetric changes in MDD. This cross-sectional structural MRI study explored the relationship between ACC volume and depressive symptoms in a large community sample. To our knowledge, this is the largest structural MRI study of this nature reported in the literature to date. This study included a total of 1803 adult subjects with structural brain MRI and Quick Inventory of Depressive Symptomatology Self-Report (QIDS-SR) scores. Brain volumes were measured using the Freesurfer program. Multiple linear regression analyses were performed to predict right and left ACC volumes using QIDS-SR scores, total brain volume, gender, age, race/ethnicity, tobacco use, alcohol use, and psychotropic medications as predictor variables. Post hoc analyses were done by gender and psychotropic medications use. Right ACC volume (b=-0.61, p=0.007) was inversely associated with QIDS-SR scores. However, there was no significant association between left ACC volume and QIDS-SR scores. In addition, there was a significant association between QIDS-SR scores and right (b=-0.71, p=0.046) but not left ACC volumes in males, and there was no significant association between QIDS-SR scores and ACC volume in females.These results suggest that right ACC volume is reduced in people with greater self-reported depressive symptom severity, and that this association is stronger in men.

No. 184

The Clinical Utility of Computer Tomography and Magnetic Resonance Imaging in First-Episode Psychosis: A Systematic Review
Poster Presenter: Malcolm Forbes, M.B.B.S.

SUMMARY:
Background: Brain imaging, either computer

tomography (CT) or magnetic resonance imaging (MRI), is routinely ordered by some psychiatrists to exclude structural lesions in patients presenting with first episode psychosis. This is recommended by USA and Australian national guidelines. This review examines the evidence for the appropriateness and diagnostic utility of brain imaging in first episode psychosis. Methods: A systematic review of the observational studies reporting diagnostic outcomes of screening with CT or MRI in patients with psychosis. Results: There were 13 studies published between 1988 and 2017 with the majority examining the outcomes of screening with CT. Most studies were retrospective file audits. The majority of studies found that while structural abnormalities were a common finding (seen in approximately one-third of patients with first episode psychosis), these findings are rarely the cause of the psychotic symptoms and rarely require clinical intervention. Across studies, brain abnormalities are found most commonly in individuals with first episode psychosis however only two of the 13 studies indicated that brain imaging should be routinely ordered in first episode psychosis. Conclusion: There is insufficient evidence to suggest that brain imaging should be routinely ordered for patients presenting with first episode psychosis. National guidelines should reflect evidence-based data.

No. 185

Examination of Cognitive Impairment Among Omanis With Mild Cognitive Impairment and Radiological Confirmation of Multi-Infarct Dementia

Poster Presenter: Mohamed Al Breiki

SUMMARY:

Some epidemiological studies have indicated that Oman the country has a high number of people with diabetes, hypertension and lifestyle that compromised the integrity of the vascular system and leads to disruption of blood flow to the brain. This contributes to cognitive impairment known as vascular cognitive impairment or Multi-infarct dementia (MID). This work purports to explore what are prodromal impairment of MID with mild cognitive impairment. In this study, we recruited Omani patients presenting with MID and age- and gender-matched controls at the outpatient clinic of the Department of Behavioral Medicine, Sultan Qaboos University Hospital. In addition to the collection of clinical, demographic information and brain scan, various cognitive batteries were administered to the consenting participants, including those indexing Intellectual Ability, Learning and Remembering, Executive Function/Self-Regulation, Mood disorder and Quality of Sleep. The results: Compared with the matched healthy subjects, the patients diagnosed with MID significantly differed in indices of Executive Function/Self-Regulation, Mood disorder and Quality of Sleep. This study indicated that impairments of Executive Function/Self-Regulation are prodromal impairment of MID rather than amnesia as previous thoughts.

No. 186

How Do You Manage the Psychosis of Huntington's Disease? An Inpatient Challenge From Admission to Discharge

Poster Presenter: Rupinder Flora
Lead Author: Hunter Caskey
Co-Author: Madona L. Pakkam

SUMMARY:

Mr. J. is a 52 y/o white male with history of Huntington's disease and schizoaffective disorder. He states he was brought to Mercy Hospital due to back pain, and was then transferred here to GMH. He states he was hit by a vehicle 1.5 years ago, and states that may be the reason for his medical condition, although he denies having Huntington's disease. When asked about his condition, he states he is perfectly healthy and has no health problems. He lives independently at a local motel and is "doing fine". Per family, patient has been declining rapidly due to Huntington's Disease and has had difficulty performing his activities of daily living. His fixed delusions made him a risk to himself and others and patient has had history of walking out into traffic and been involved in multiple motor vehicles accidents. Pt presented multiple inpatient management obstacles in addition to the normal treatment course that were compounded by his deteriorating medical condition. In this poster, we discuss the additional challenges that are faced with managing patients with Huntington's Disease in the psychiatric inpatient setting. We will also further discuss

obstacles faced from the admission process, treatment plan, discharge, and follow up by this complicated disease process and how to best manage symptoms in an inpatient stetting.

No. 187

A Delphi Approach to the Screening, Diagnosis, and Treatment of Tardive Dyskinesia

Poster Presenter: Stanley N. Caroff, M.D.
Co-Authors: Leslie L. Citrome, M.D., M.P.H., Jonathan M. Meyer, M.D., Kim Riggs, Martha Sajatovic, M.D., Andrew Scheifele, Terence Ketter, M.D.

SUMMARY:
With the increasing use of antipsychotic medications, particularly in mood disorder patients, tardive dyskinesia (TD) risk has continued to be an ongoing safety concern. Historically, physicians had no options that were FDA-approved for treating TD, but the therapeutic landscape changed in 2017 with the FDA approvals of valbenazine and deutetrabenazine for TD. Now that FDA-approved TD treatments are available, it is necessary to revise currently available best practices for screening, diagnosing and treating TD in psychiatric patients. In October 2017, an 11-person Steering Committee was convened to devise a Delphi method to help establish consensus for TD nomenclature, screening methods, diagnostic criteria, and treatment strategies. The iterative nature of the questioning process and participant anonymity, which are key features of the Delphi method, avoids the pitfalls of face-to-face discussions wherein group dynamics often interfere with the rational process of consensus discovery. Moreover, it has been used successfully for a variety of medical applications where evidence is unclear or incomplete regarding diagnostic criteria or treatment. Committee members agreed to a quorum of 30 qualified experts to participate as Delphi panel members and complete at least two rounds of surveys. The Committee will be responsible for developing Delphi panel surveys and evaluating the level of consensus for each round of the Delphi panel survey. If needed, additional rounds will be conducted to reach consensus. The initial Delphi panel survey includes questions about the types of patients to be screened, frequency of screening, and screening methods. The survey also includes questions about terminology, key diagnostic criteria (e.g., medical history, prior/current medications, visible abnormal movements), assessment tools (e.g., Abnormal Involuntary Movement Scale, Extrapyramidal Symptom Rating Scale), treatment strategies (e.g., antipsychotic regimen modification, prescription of FDA-approved medications), and other treatment considerations (e.g., patient preference/distress, impairment due to TD symptoms). Core topics for consensus will be honed during the Delphi process and final recommendations from the expert consensus process on managing TD will be presented at the meeting. Sponsored by Neurocrine Biosciences, Inc.

No. 188

Response Predictors of Dialectical Behavior Therapy in Veterans at High Risk for Suicide

Poster Presenter: Andrea Bulbena, M.D.
Co-Authors: Marianne Seligson Goodman, M.D., K. Nidhi Kapil-Pair, Chi Chan, Rachel Harris, Maria Mercedes Perez-Rodriguez, M.D., Ph.D., Erin Hazlett, Ph.D.

SUMMARY:
Background: Dialectical Behavior Therapy (DBT) has proven to be especially effective managing emotion dysregulation in the treatment of suicidal behaviors in borderline personality disorder. However, little is known about factors that determine DBT response in high risk populations. In this study we aimed to evaluate different response predictors of DBT in Veterans at High Risk for suicide to determine at the beginning of treatment the likelihood of success based on pretreatment characteristics. Methods: A total of 29 patients characterized at high risk for suicide completed a 6-month course of DBT. Assessments included a structured interview (SCID), the Beck Anxiety Inventory (BAI), the Beck Depression Inventory (BDI), the Beck Hopelessness scale (BHS), the Columbia Suicide rating Scale (CSRS), and the Combat Expose Scale (CES). Multiple regression analyses were used to define the predictors of response to DBT based on the change in primary outcome measures including anxiety and hopelessness. Results: Predictors of response to DBT were higher number of suicide attempts (p=0.019), higher baseline anxiety (p=0.017), older age (p=0.017), and higher education (p=0.005) when

change in anxiety scores were used as the outcome measure. Being a male predicted poor response to DBT (p=0.003). Additionally, greater combat trauma exposure (p=0.001) also predicted better response to DBT when using hopelessness as the outcome measure. Conclusion: Clinical implication include the need to consider the number of suicide attempts, anxiety severity at baseline, exposure to combat trauma as well as some socio-demographic characteristics such as gender, age, and education prior to offering a course of DBT. Questions regarding gender effect on DBT response should be further studied in subsequent studies.

No. 189

The Intersection of Mental and Oral Health: A Review of the Issues

Poster Presenter: Nicolle Castaneda

SUMMARY:

Objectives: The objective of this literature review is to assess the relationship between oral and mental health by analyzing several studies focused on the oral health of people with severe mental illnesses . In addition we aim to develop a preventive intervention to help improve the oral health of this target population. Methods: Studies focused on individuals with major depression, bipolar disorder, and schizophrenia with oral health components were analyzed in order to get a grasp of the different issues. Then, inputs, processes, outputs, and outcome were determined and a logic model for an education-based intervention was created to improve the oral health of individuals in this target population. Results: The literature review established that individuals with severe mental illnesses have oral health problems and that currently, no evidence-based preventive interventions exist for this subgroup of people. There is an expected decrease in the Simplified Oral Hygiene Index which should increase overall oral health in people with mental illness. Conclusion: It was established that individuals with severe mental illnesses have decreased oral health in comparison to mentally healthy individuals. Since no evidence-based models of intervention exist for this issue, our dental education intervention was created and is expected improve the oral hygiene practices of people with severe mental illnesses.

No. 190

Fall Risk in a Community Inpatient Psychiatric Setting

Poster Presenter: Michael Anthony Serna, M.D.
Co-Author: Gagandeep Randhawa

SUMMARY:

Falls in an inpatient medical setting are reported as 11.3% within 24 hours of starting a high-risk medication. Risk factors for falls have been defined in medical settings but limited data exist in psychiatric settings. Short acting benzodiazepines, multiple medications, medications affecting the CNS, medical conditions, and advanced age are some risk factors that have been defined. Current recommendations for treatment of acute agitation include antipsychotics and benzodiazepines. This is a retrospective cohort study assessing association of falls with psychotropic medications and comorbidities in all patients (N = 6729) admitted to Kaweah Delta Mental Health Hospital between January 1, 2015 and December 7, 2017. Patients who had a fall (N = 500) were significantly more likely to have received intramuscular chlorpromazine (OR = 1.55, 95%CI: 1.02 - 2.35), haloperidol (OR = 2.16, 95%CI: 1.74 - 2.68), olanzapine (OR = 1.87, 95%CI: 1.40 - 2.51), ziprasidone (OR = 3.26, 95%CI: 2.37 - 4.48), diphenhydramine (OR = 2.08, 95%CI: 1.69 - 2.56) or lorazepam (OR = 2.30, 95%CI: 1.88 - 2.82) within 24 hours prior to a fall. Patients with a fall were also significantly more likely to have a epilepsy (OR = 2.96, 95%CI: 1.64 - 5.34). Diagnosis of hypotension, use of diuretics, or males were not significantly more likely to have a fall. Inpatient psychiatric hospital is an area where limited data exists. Our study is congruent with studies done in non-psychiatric settings despite mean age being 37.65 years. Recommended treatments for acute agitation need to be balanced against the risk of fall.

No. 191

Rare Encounters: How Medical Students Gave ACT Team Visits Rave Reviews

Poster Presenter: Jacob Daniel Kanofsky, M.D., M.P.H.
Co-Authors: Mary Elizabeth Woesner, M.D., Dmitri Bronovitski, M.D., Ian DaCosta, M.S.W., Mindy Geliebter, M.S.W.

SUMMARY:
The Bronx Psychiatric Center Assertive Community Treatment Team (BPC ACT Team) has invited third-year medical students to join ACT Team staff on their rounds for the last ten years. Third-year medical students have spent one or two days of their six-week psychiatry rotation going out into the Bronx community with the BPC ACT Team to see patients. The students have frequently expressed in writing their enthusiasm for this program, calling it a "great" or "excellent" experience. Other student comments have included: "It was very nice to see how patients live in their homes and see them interact with family members and get a better sense of their home life." "Seeing how the team had positively affected their lives was one of the best experiences I have had at psychiatry." "This was a very unique experience that I found very informative." "One of a kind experience that is different from anything else in medical school. Definitely a positive experience." We will describe the medical student ACT team experience. We believe ACT Teams are an underutilized medical student teaching tool.

No. 192
WITHDRAWN

No. 193
Clinical and Demographic Profile of Patients Receiving Benzodiazepines for the Treatment of Anxiety Disorders at a Specialized Center in Puerto Rico
Poster Presenter: Estefanía Quiroz, M.D.
Co-Authors: Roberto A Leon-Barriera, B.S., Karen G. Martinez, M.D., M.Sc.

SUMMARY:
Background: Anxiety disorders are those characterized by excessive fear, anxiety, and related behavioral disturbances. Despite the high prevalence of these disorders among Hispanics and Latinos, there are marked health disparities in access to high quality evidence-based treatments. Benzodiazepines are among the most commonly prescribed treatments for anxiety disorders. However, according to evidence-based practices, their use should be limited to the acute phase of treatment. Considering the well-known mental health care disparities among Latino and Hispanic populations, it is important to examine tendencies in benzodiazepine use. In particular, we were interested in evaluating whether benzodiazepine prescription practices in Puerto Rico follow evidence-based guidelines. **Methods:** We evaluated the use of benzodiazepines in 86 subjects receiving treatment for anxiety disorders from 2013 onwards at the Center for the Study and Treatment of Fear and Anxiety at the University of Puerto Rico. This cross-sectional, secondary data analysis describes social and demographic characteristics, comorbidities, as well as the relative timing of benzodiazepine prescription during treatment. **Results:** Demographic analysis showed 72% of our study participants were female, 28% were male, with ages ranging from 21–76 years. Subjects were divided by age groups as follows: 18–25 (average=22.8), 26–35 (average=29.7), 36–50 (average=42.15), 51–60 (average=55.6), 61–70 (average=66), and>70 (N=1). Our study revealed that overall, 53% of all study subjects were prescribed benzodiazepines at some point during treatment, while 47% did not receive a benzodiazepine prescription at all. Among those subjects referred for psychopharmacological evaluation, only 39% were prescribed benzodiazepines during initial assessment. Generalized Anxiety Disorder, identified in 27% of subjects, was the most prevalent diagnosis within the study group. However, among these, 80% had comorbid psychiatric conditions **Conclusion:** In addition to characterizing a Hispanic study population undergoing treatment for anxiety disorders, we have highlighted that at a clinic specializing in the treatment of anxiety disorders, most patients were not initially managed with or prescribed benzodiazepine medication. We eventually hope to identify potential diagnostic or psychological factors associated with a greater likelihood of benzodiazepine use in the treatment of anxiety.

No. 194
Suicidal Behavior Attended in the Hospital Emergency Department: Recurrence During the 12-Month Follow-Up After the Index Episode
Poster Presenter: Ana-Isabel De Santiago-Díaz
Co-Authors: Raquel Medina-Blanco, Marina Pérez-Herrera, Enrique López-García

SUMMARY:
Background: Suicide behavior constitutes a serious problem in public health care services and it is common phenomena in general and psychiatric populations. Suicide attempt is an acknowledged risk factor for completed suicide, but the relationship between suicide ideation and completed suicide remains sunk into oblivion. Identifying factors associated with suicidal behavior may contribute to the prevention of suicide. **Objective:** The aim of this study is to identify factors in the index episode of Suicide Behavior (SB), both suicide attempt and suicidal ideation, related to subsequent recurrence of SB. **Methods:** Design. Cohort study with 12 months follow-up. Data collected. At Index episode: Lifetime SB, Sociodemographic and clinic parameters, and diagnostic categories *DSM-IV*-R. Subsequent emergency visits and SB were monitored. Setting. Emergency Department (ED) of Valdecilla University Hospital (Santander, Spain). Participants. 113 consecutive patients referred to the on-call Psychiatrist for suicide attempt or suicidal ideation during March-June 2015 (mean age=43,31; range 16–84; 66% women). Data analysis: SPSS-22. **Results:** During the 12 months follow-up period 70% of the cohort made 266 urgent consultations (22 per month), 68 of them were episodes of SB, more often at first semester. 37 cases (33%) were admitted to ED with SB (53% suicide attempts, 47% suicidal ideation). 28 cases (25%) had required hospitalization (15% in first-half). Meaningful differences were found in SB recurrence relating to the mental health services linkage: SB recurrence occurs more often in people in contact with mental health services than those without linkage, whether prior to index episode (39% vs 21%, p<0,05), or during the year following (42% vs 9%, p=0,001). People with SB recurrence also made more urgent consultations due to other reasons than those without SB recurrence (76% vs 55%, p=0,03). In comparison with the rest of the group, people with Prior Personality Disorder most often (86% vs 66%, p<0,05). No statistical differences were found concerning to gender, age or previous SB profile. One case o f suicid e occurred (0,7%, male, aged 43) with no recognized predisposing factors (good partnership, no drug abuse, no stressful life events neither personal nor familiar suicidal background, no chronic pain or disabling disease) but coexisting psychiatric disorder (depression). Two elderly women died of medical causes. **Conclusion:** The 33% of the individuals has repeated once again suicidal behavior after the index episode during the following year and one of each four had required hospitalization. Also, the 70% of the whole group has made repeatedly emergency visits during this period. One patient consummated suicide. Overall, despite its generally high quality, the conventional assistance of established mental health care system in not sufficient to meet the needs of people with suicidal behavior. Further studies to provide the design of preventing strategies as well as specific resources and interventions programs are needed to prevent suicide and recurrence of suicidal behavior.

No. 195
The Correlation of Chronic Physical Diseases With Suicidal Ideation
Poster Presenter: Junghyun Han
Co-Author: Seong Hwan Kim

SUMMARY:
Objective: To clarifies the association between chronic physical disease and suicide ideation and provide implication to suicide prevention policy. Background and aims: Patients with chronic physical diseases suffer from high level of psychological distress, which is potential vulnerable factor for suicide. The aim of this study was to investigate the effect of chronic physical diseases on suicidal ideation among Korean adults. Materials and Methods: Analyses are based on data from sixth Korea National Health and Nutrition Examination Survey(2013-2015) conducted by Korea Centers for Diseases Control and Prevention. The survey used a cross-sectional, national and representative sample consisting of 10 939 who were selected using a stratified, clustered, multistage sampling method. Logistic regression analysis was conducted to test the association between chronic physical diseases and suicidal ideation while controlling for demographic characteristics and depression. Results: Our final regression model revealed that arthritis(OR=1.708, 95%CI: 1.28-2.27, P<0.001), asthma(OR=2.39, 95%CI: 1.49-3.84, atopic dermatitis(OR=2.52, 95%CI: 1.49-4.24, P=0.001), chronic kidney disease(OR=4.12, 95%CI: 1.81-9.35,

P<0.001) were increased the likelihood of suicidal ideation. Conclusions: Patients with chronic physical diseases are at risk of suicide ideation. This finding highlights the need to assess suicidal risk for patients with chronic physical diseases. Mental health policies to prevent suicide risk are warranted. Key words: Chronic physical diseases, Suicide, Primary care, Representative sample

No. 196

Risk Factors for Relapse After Suicide Attempt: Results From a Hospital-Based Follow-Up Study

Poster Presenter: Gonzalo Martínez-Alés
Co-Authors: Eduardo Jimenez, Eva Román, Pilar Sánchez Castro, Consuelo De Dios, Beatriz Rodriguez Vega, Maria Fe Bravo

SUMMARY:
Background: Suicide is a global public health issue and the second cause of death among the youth worldwide. Suicide attempts are considered faithful risk markers and entail a 25-fold increase of risk. Other individual risk factors include psychiatric disorders, such as mood disorders, drug and alcohol consumption or psychoses, as well as certain social stressors like socioeconomic disadvantage, immigration and the lack of social support. The objective of this study is to estimate the risk associated to each main psychiatric disorder. Method: We conducted an observational study including 788 patients receiving medical and psychiatric care after a suicide attempt at a general hospital emergency department (ED). The principal outcome measure was ED return due to a new suicide attempt during a one-year follow-up. Time to relapse was obtained from hospital records. We derived Kaplan-Meier survival functions. Cox proportional hazard regression models were used to estimate unadjusted and adjusted hazards of relapse by psychiatric disorder, as well as by other social and clinical covariates. Statistical significance was established at the .05 level. Results: During a one-year follow-up, 90 subjects (11.42%) relapsed. After adjusting for gender, age, family support, suicide attempt history, and alcohol or drug abuse, the risk of relapse among patients with a mood disorder was higher, HR(95%CI): 1.86(1.20-2.86), while among those with an adjustment disorder was lower, HR(95%CI): 0.66(0.42-1.00)

No. 197

Predictors of Inpatient and Post-Discharge Suicide in Psychiatric Inpatients: A National Register-Based Study in Taiwan 2002–2013

Poster Presenter: Mei-Chih Tseng, M.D., Ph.D.
Co-Authors: Chinhao Chang, Ph.D., Shih-Cheng Liao, M.D., Ph.D.

SUMMARY:
Objectives: This study aimed to assess the predictors of inpatient and post-discharge suicide over the period of 2002 to 2013 in Taiwan. Methods: Inpatient and post-discharge suicide cases were 15-year-old and above and were defined by individuals who had an admission at psychiatric inpatient units and died of suicide during hospitalization or within three months of discharge. They were selected from inpatient database of the National Health Insurance linked to the National Register of Deaths by a unique identified number. Suicide methods are grouped into five categories: hanging, jumping from heights, solids/liquids and other gases poisoning, drowning, and others. Patients' psychiatric diagnosis was adopted from the main discharge diagnosis of the index admission and divided into schizophrenic spectrum disorders, affective disorders, and others. Univariate analyses were used to examine differences of characteristics between inpatient and post-discharge suicide. Multivariate analyses were applied to examine variables associated with inpatient and post-discharge suicide death by using Cox survival analysis, in which calendar year was fitted as a continuous variable together with gender, age, diagnosis, and number of admission during the previous one year. We also added length of stay to examine the influence of it on post-discharge suicide. Results: A total of 192 individuals died of suicide while inpatients and 1359 individuals died of suicide in the 3-month post-discharge period. While jumping from heights and hanging were predominant suicide methods in both kinds of suicide patients, poisoning was also commonly seen in patients suicide after discharge. The predominant diagnoses in inpatient suicide were schizophrenic spectrum disorders, in contrast to affective disorders in recently discharged suicide. Majority of individuals died while inpatients had length of stay longer than three months, in contrast to individuals died of

suicide after discharge had length of stay between 8 days and one month. Multivariate analyses of inpatient suicide showed male gender, affective disorders, and number of previous admissions increased, but age older than 65 year-old decreased the risk of inpatient suicide. Inpatient suicide was also decreased according to calendar year. Multivariate analyses of post-discharge suicide showed schizophrenia and affective disorders increased but younger age (15-24 year-old) and number of previous admission decreased the risk of post-discharge suicide. Longer length of stay showed decreased risk of suicide in the 3-month post-discharge in contrast to those staying less than 7 days. Conclusions: Our results showed distinctive features for risk prediction, especially for age profile, and number of previous admissions, between inpatient suicide and suicide in the 3-month post-discharge. This study suggested successful inpatient treatment of suicide risk with optimal length of stay might help reduce suicide risk after discharge.

No. 198

Clinical Factors of the Index Suicide Attempt Predicting Later Death by Suicide Repetition

Poster Presenter: Kyoung-Uk Lee

SUMMARY:

Objective: Suicide attempt (SA) is a strong predictor for later death by suicide. We examined the various variables of patients who visited emergency department (ED) due to SA and investigated predictors of later confirmed death by suicide. Method: Psychiatric interview was performed for 1,361 patients who had visited ED due to SA (index SA) of three university hospitals by psychiatric residents. Medical records of the 1361 patients were reviewed to examine the 2nd visit ED due to SA. Patients were divided into two groups based on consequences of 2nd visit: patients who died by SA (n=14, 1%) and patients who survived from SA (n=81, 6%). Result: The results showed that patients who died were older, had middle socioeconomic status (SES) and lower global assessment of functioning (GAF) score, wrote more will, were less likely to have past history of major depressive disorder, had more illness/serious injury to self and less interpersonal conflict/stress as precipitating factor for suicide. Multivariate logistic regression analyses showed that our model was significant ($\chi 2=26.04$, $p<0.001$) with significant predictors including socioeconomic status (Odd Ratio (OR) 14.29, 95% Confidence Interval (CI),1.43-143.08), age over 45 (OR 5.74; 95% CI, 1.23-26.72), male sex (OR 3.96; 95% CI, 0.91-17.18), and the current GAF score at ED (100-current GAF score, OR 1.17; 95% CI, 1.02-1.34). Factors that served as protective factors against death by suicide were the interpersonal conflict/stress (OR 0.25, 95% CI, 0.06-1.02). Conclusion: Middle class older males were at high risk of later death by suicide reattempt. The present findings may be valuable in screening high risk group of later death by suicide in initial interview at emergency department.

No. 199

Sexual Harassment, Sexual Assault, and Physical Activity Among U.S. Military Servicemembers in the Millennium Cohort Study

Poster Presenter: Connie Thomas, M.D.

SUMMARY:

Background: Sexual harassment and sexual assault continues to be a focus of prevention efforts in the U.S. military because of it prevalence and potential to impact force health protection and readiness. Limited research exists on the association of sexual harassment and assault with coping behaviors, such as physical activity. Method: Data were obtained from The Millennium Cohort Study, a longitudinal cohort study designed to examine the health impact of military service among Service members. Self-reported physical activity, sexual assault and sexual harassment within the past three years was assessed. A hierarchical regression approach was applied to examine the association between sexual harassment or assault and subsequent physical activity levels. An unadjusted multinomial regression was used to investigate the association. We then used a series of multivariable multinomial regression models to further examine the association of sexual harassment and sexual assault with physical activity. Results: Hierarchical regression showed that, among those self-reporting recent sexual assault, the odds of having high physical activity levels (>300 minutes/week) was significantly increased. While the magnitude of these associations decreased with increasing amount of adjustment, the odds of high physical activity levels remained statistically

significant in the fully adjusted model (medium-high: OR 1.72, 95% CI 1.08-2.73; high: OR 1.58, 95% CI 1.02-2.44). Conclusion: Recent sexual assault increased the likelihood of high levels of physical activity among military Service members in our study. Analyzing the relationship between sexual trauma and physical activity is valuable because of Service member health implications, including physical and emotional well-being.

No. 200

EEG Recording During an Emotional Face-Matching Task in Children of Mothers With Interpersonal Violence-Related Posttraumatic Stress Disorder

Poster Presenter: Daniel Scott Schechter, M.D.

SUMMARY:

This is a longitudinal study of children (5 to 9 years old) who were evaluated in Phase I of the Geneva Early Childhood Stress Project (ages 12-42 months). Results during Phase 1 suggested that mothers with interpersonal violence-related posttraumatic stress disorder (IPV-PTSD) showed disturbances in emotion-appraisal. This study tests the hypotheses: 1) that their children compared to those of non-PTSD mothers (controls) would share similar disturbances regardless of whether or not they were violence-exposed themselves; and 2) that EEG findings would correspond to the expected group-differences. We recorded HD-EEG during an emotional face matching task (EFMT) in 32 subjects (16 children of mothers with IPV-PTSD and 16 children of non-PTSD controls), mean age = 7.6 years (SD=0.83; range=6.0-9.1), using the Geodesics HydroCel System with 257 electrodes. The task requires matching faces sharing similar emotions. We then performed event-related potentials analysis (ERPs), grand average segmentation and explored inverse solutions using Cartool software. ERP results demonstrated significant differences between groups in terms of amplitude for the P1 and N170 components in response to angry, fearful and happy faces, and for the late positive component for angry and fearful faces ($p<.05$, temporal constraint = 30TF). Grand average segmentation also demonstrated significant differences between groups for the faces-related ERP component, N170, in response to angry, fearful and happy faces. Finally, exploratory results regarding inverse solution demonstrated stronger activation in the face fusiform area (FFA) for angry faces in controls whereas PTSD showed stronger activity in the same area for fearful faces. Activation in the FFA in response to happy faces was not different between groups. These results obtained with EEG recording in 32 children in response to specific emotions supported the idea of group-differences in processing of facial expressions, measured in ERPs, grand average segmentation and inverse solution analysis. Our results seem to

No. 201

How Worse Are the Hospitalization Outcomes in PTSD Patients With Comorbid Opioid Use?

Poster Presenter: Priya Patel
Co-Authors: Rikinkumar Patel, Geetha Manikkara, Jupi Talukdar, Zeeshan Mansuri

SUMMARY:

OBJECTIVE: To determine the impact of Opioid Use Disorder (OUD) on inpatient outcomes of Post-Traumatic Stress Disorder (PTSD). BACKGROUND: OUD is a common comorbidity that significantly affects the quality of life and disease outcomes in PTSD patients. To our knowledge, no studies have been conducted to address the hospitalization outcomes in comorbid OUD patients. The primary objective of this research study is to analyze the differences in the hospitalization outcomes in PTSD patients versus PTSD with OUD patients. METHODS: We used the Nationwide Inpatient Sample (NIS) from the Healthcare Cost and Utilization Project (HCUP) from year's 2010-2014. We identified PTSD and OUD as a primary and other diagnosis respectively using validated International Classification of Diseases, 9th Revision, and Clinical Modification (ICD-9-CM) codes. We used the binomial logistic regression to generate adjusted odds ratios (aOR). RESULTS: We analyzed a total of 31,148,850 PTSD hospital admissions from year's 2010-2014 of which 1.3% had OUD. Mean age of patients was 48.5 years (SD= 27.5). Prevalence of OUD was highest in PTSD in 18-44 years age (55.2%), predominant in male population (51.5%) and the White race (71.6%) (p-value <0.001). PTSD with OUD was seen in higher proportion of low-income families (61.8%) (p-value <0.001). OUD increases the risk of longer inpatient stay >3 days (median) (aOR= 1.468; p-value <0.001) but associated with

decreased risk of higher inpatient charges >$22,315 (median) (aOR= 0.638; p-value < 0.001). PTSD with OUD increases the risk of disposition to skilled nursing or other facility (aOR= 1.123; p-value < 0.001). Higher proportion of PTSD with OUD patienst were discharged against medical advice (8%) compared to only PTSD patients (1%). The utilization of behavioral therapies was 1.3 times higher in PTSD with OUD patients (aOR= 3.625; p-value < 0.001). CONCLUSIONS: Our study establishes the negative impact of OUD in PTSD with regards to hospitalization-related outcomes including the length of inpatient stay and disposition. This study also show greater chances of utilization of behavioral therapies in PTSD with OUD patients which is an indication for better prognosis. Our next study will discern the differences in PTSD with OUD patients with/without behavioral therapies.

No. 202

Role of Personality Traits in Postpartum Stressors Perception

Poster Presenter: Aiste Lengvenyte
Co-Author: Robertas Strumila

SUMMARY:

Background and aims: Postpartum period has been capturing psychiatrists attention for increased risk of mood and anxiety disorders. Yet, even though women experience difficulties - many of them remain without guidance. We decided to find out what impact different personality traits have on everyday stressors perception. This knowledge could help to individualise treatment and support strategies. Materials and methods: Cross-sectional study was carried out. Women were asked to fill an anonymous questionnaire during their regular check-up at 6th week after delivery. It included sociodemographic questions, 8 questions about postpartum stressors with maximum score of 4 (total 36 points), and the “Big Five” personality dimensions’ scale. Results: 59 women participated in the study. Mean score in postpartum stressors perception scale was 16.10 (SD 5.34). Stressors perception was correlated positively with neuroticism (p<0.001), negatively - with extroversion (p<0.001), consciousness (p<0.05), agreeableness (p<0.001), and openness (p <0.05). Extroversion and openness were correlated with less stress from relationship with partner (p<0.05 for both). Extroverts also scored less on stress from breastfeeding (p <0.001). High neuroticism score was correlated with stress from relationship with a partner (p <0.001) and breastfeeding (p<0.001). Women, who scored high in consciousness perceived less stress of being a mother (p<0.001). Agreeableness was correlated with less stress from breast feeding (p<0.001) and financial issues (p<0.05). Conclusions: Personality traits are very important for perception of everyday stressors in postpartum period. Different personality traits had influence on different stressors. Therefore, determining main traits of women’s personality would be an accessible way to detect women in need for personalised support.

No. 203

Influence on Event-Related Potentials in Attention-Deficit/Hyperactivity Disorder Comorbid With Autism Spectrum Disorder

Poster Presenter: Norio Otsuka
Lead Author: Kazuhiko Yamamuro
Co-Authors: Hideki Nishimura, Maori Yasuda, Shizuka Taguchi, Chieko Aoki, Naoko Kishimoto, Shotaro Ueda, Toyosaku Ota, Toshifumi Kishimoto, M.D.

SUMMARY:

Autism spectrum disorder (ASD) and attention deficit/hyperactivity disorder (ADHD) are two of the most commonly diagnosed childhood neurodevelopmental disorders. In the last decade, research has revealed that the prevalence of ADHD and ASD has increased, and an increasing number of cases of comorbid ADHD and ASD has been reported. Although the Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition Text Revision (DSM-IV-TR) precluded co-morbid diagnosis of ADHD and ASD (ADHD/ASD), the fifth edition of the DSM (DSM-5) allows clinicians to diagnose ADHD and ASD simultaneously. However, there exists substantial symptom overlap between ADHD and ASD. Therefore, despite slight differences in symptomatology, differential diagnosis of ADHD versus ADHD/ASD can be challenging. However, some studies have shown that event-related potentials (ERPs) recorded during facial expression tasks can be a powerful tool for differentiating between these two disorders. We evaluated

auditory oddball task performance via ERPs in 31 and 17 patients with ADHD and ADHD/ASD, respectively, and 22 healthy controls matched for age and sex. We measured P300 and mismatch negativity (MMN) amplitude during the task. Clinical psychopathology was evaluated using the ADHD Rating Scale-IV-Japanese version and Child Autism Rating Scale. The ADHD/ASD group showed greater P300 amplitude attenuation at Cz and poorer P300 task performance relative to that of the ADHD group. Both patient groups showed greater P300 and MMN amplitude attenuation and longer latency in several positions relative to that of the control group. Moreover, ERP measurements were positively correlated with ADHD hyperactivity-impulsivity subscale scores. Our findings suggested that ERP measurement could be used to differentiate between patients with ADHD/ASD and ADHD, providing new insight into impulsivity in ADHD and/or ASD.

No. 204

Pre- and Perinatal Risk Factors for Autism Spectrum Disorder

Poster Presenter: Raz Gross, M.D.

SUMMARY:

Introduction: Autism is a chronic neurodevelopmental disorder characterized by social and language impairments, and stereotyped repetitive patterns of behavior. Prevalence rates of autism have increased markedly worldwide including Israel. While most plausible neurodevelopmental theories of autism focus predominantly on genetic factors, data from epidemiological studies emphasize the importance of non-genetic risk factors for autism. Objective: To summarize current and most recently updated knowledge of non-genetic, parental, prenatal, and delivery-related risk factors for autism. Methods: We collected published findings from epidemiological studies by searching MEDLINE and by screening major journals likely to publish epidemiological studies on this topic. In addition, we present original Israeli and international data on autism risk factors through our own research, using the International Collaboration for Autism Registry Epidemiology (iCARE) big database, as well as data from the Israeli national birth and autism registries. Results: Various parental characteristics, in-utero exposure to certain medications and environmental pollutants, and obstetric conditions, appear to be associated with an elevated risk of autism. For instance, results from our study have shown that advancing paternal and maternal age, parental age difference, delivery by cesarean section, and birth weight have all been associated with increased risk for autism. Conclusions: Findings from epidemiological studies suggest that exposure to several parental, prenatal, and delivery-related factors may increase the risk of autism. Identifying modifiable risk factors for autism has important public health and clinical implications, especially in view of the dramatic increase in the reported prevalence of autism. Given the inconsistency across studies and populations for some results, and the plausibility of additional yet unrecognized risk factors, large epidemiological, population-based birth cohort studies are of particular importance.

No. 205

Difficulties in Managing of Psychotic Symptoms Faced With Appearance of Motor Alterations

Poster Presenter: Carlos Rodríguez Gómez-Carreño
Co-Author: Fernando García Lázaro

SUMMARY:

Mrs F., a 82-year-old female attended at the emergency room presenting psychotic symptoms consisting of delusions and hallucinations, along with behavioral alterations and a progressive deterioration of rapidly evolving mental status. The patient did not provide a psychiatric history. After being admitted to the Psychiatry service, subsequently presents mutism, generalized myoclonus and ataxic gait that worsens after the introduction of neuroleptics. Follow-up is started in a coordinated way together with the Neurology service, performing complementary tests and finding alterations in electroencephalogram and magnetic resonance . A differential diagnosis is made with other psychotic disorders and with alteration at motor level as well as dementias. This case led the team to reflect on the handling of this type of patients where an appropriate protocol of action and coordinated care among different professionals contributes favorably to the diagnosis and subsequent evolution. In this poster we discuss the

importance of a correct evaluation and diagnosis in the presence of psychotic symptoms and the appearance of other types of alterations whose evolution does not follow a habitual pattern.

No. 206

Can Computer Scans Make an Objective Diagnosis of PTSD? Face2Face® Facial Microexpresions of Emotion (FMEE) Proof of Concept Study at the Boston VA

Poster Presenter: William Dalelio, Ph.D.

SUMMARY:

Background: 20% of veterans (4mil) suffer from PTSD. Only 50% of them receive treatment. 22 PTSD Veterans suicide every day. The most commonly used PTSD screening methods (e.g. PCL-M) are estimated to be only 40% accurate. Face2Face®, a telehealth application, is being developed to increase the speed and accuracy of PTSD diagnosis by using computer analysis of FMEEs. Methods: 50 patients* with PTSD in the VA Boston Healthcare System will have their quantified PTSD Clinician-Administered PTSD Scale for DSM-5(CAPS-5) scores compared to their emotional valance and arousal scores derived from video-taped responses to 60 pictures from the Open Affective Standardized Image Set (OASIS), Their patterns of reactivity, recovery, and emotional regulation will be coded using the Microsoft Azure Emotion API. The results will be analyzed using mixed model multivariate repeated measures statistics from SPSS. The derived FMEE algorithms will, in fact, be biometric markers of the severity of the patients' PTSD. Co-existing medical and psychiatric conditions from patients' medical records and the Millon Clinical Multi-Axial Inventory will be considered in interpreting the data. It is predicted that significant replicable relationships will be found between CAPS-5 PTSD severity ratings and patterns of emotional regulation in PTSD subjects, and that PTSD subjects' emotional responses will differ significantly from the OASIS normative sample. The findings of this study will serve as the proof of concept for Face2Face®. Follow-up studies with larger patient samples using neural-network machine learning are planned. The goal: A set of FMEE bio-metric markers that quantify patients' PTSD via telehealth rapidly, but as accurately, as the CAPS-5. Results: Preliminary results from pilot study interviews (n=20) with combat veteran volunteers who had PTSD disability ratings of 50% or higher vs combat veterans with no evidence of PTSD found significant differences in the aggregated intensities of FMEEs for the two groups: Anger p<.01, Disgust p<.01, Sadness p<.05, Fear p<.05, Surprise (Startled) p<.05. A significant difference in the overall time of subjects' emotional valances was found as well: SUM of Neutral Valance > SUM of Positive + Negative Valences combined p<.001. The Boston VA Proof-of-Concept study will begin early in the 1Q 2018. If available, preliminary outcomes will be reported during the 2018 APA annual meeting. If successful, a larger clinical study will be undertaken to confirm findings and develop algorithms to predict violent or suicidal behavior. * Patients who are actively suicidal or homicidal will be excluded from the sample.

No. 207

Increased Prevalence of MDD, PTSD, and Medical Conditions With Military Sexual Trauma

Poster Presenter: Gen Shinozaki, M.D.
Lead Author: Lindsey Gaul
Co-Authors: Nick Bormann, Sayeh Sabbagh

SUMMARY:

Background: PTSD and MDD are common and debilitating psychiatric disorders in military service members, although it is not clear why some individuals are more vulnerable. Female military personnel are at high risk for exposure to military sexual trauma (MST) during their service, creating an unfortunate, yet unique subset of shared experience/trauma. Trauma/stress studies are usually heterogeneous in nature, and examining a more homogeneous population with elevated rates of disease associated exposures to a relatively uniform type of trauma allows for novel study design. The present study investigates the associations of MST with major depressive disorder (MDD), posttraumatic stress disorder (PTSD), and various medical conditions including diabetes, fibromyalgia, fatigue or chronic pain. Methods: <318 military personnel (169 male and 147 female) were recruited through a study conducted at the Iowa City Veteran's Affairs Medical Center. Computer Assisted Telephone Interviews were conducted, which included the PTSD Checklist for DSM-5 (PCL-5), CES

Depression scale, Adverse Childhood Experience (ACE) Questionnaire, military deployment and combat experience, and histories of MST, and other type of military and civilian trauma. Linear models were used in R (v 3.4.3) to control for covariates. Results: 318 subjects were interviewed with mean age of 34.7 years (SD = 5.4); a total of 92 (17 male (10%) and 75 female (51%) experiencing either attempted or completed sexual assault. Model results showed that MDD was significantly associated with history of military trauma and ACE while controlling for MST for both gender groups. While using same covariates, PTSD showed a significant association with history of MST, military trauma and ACE among female, although only military trauma was significant among male. Current medical comorbidities were significantly associated with history of military trauma. Conclusion: Our data show that MDD and PTSD are significantly associated with military trauma and that PTSD specifically is at an increased with MST among female. The findings showing association with ACE and MDD or PTSD is consistent with literature illustrating the lifelong impact of early adversities. While a limited medical status was assessed, the increase in chronic health conditions with history of military trauma while not with civilian trauma suggests that veterans are prone to a unique trauma exposure.

No. 208

Changes in Fatigue, Autonomic Functions, and Blood Biomarkers Due to Sitting Isometric Yoga in Patients With Chronic Fatigue Syndrome

Poster Presenter: Takakazu Oka, M.D.

SUMMARY:

Background: We found that sitting isometric yoga improves fatigue in patients with myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) who are resistant to conventional therapy in our previous randomized controlled trial. The aim of this study was to investigate possible mechanisms behind this finding by comparing autonomic nervous function and blood biomarkers before and after a session of isometric yoga. Methods: Fourteen patients with ME/CFS who remained symptomatic despite at least 6 months of conventional therapy practiced sitting isometric yoga (biweekly 20 min practice with a yoga instructor and daily home practice) for eight weeks. Acute effects of sitting isometric yoga on fatigue, autonomic function, and blood biomarkers were investigated after the final session with an instructor. The effect of isometric yoga on fatigue was assessed by the Profile of Mood Status (POMS) questionnaire immediately before and after the session. Autonomic nervous function (heart rate (HR) variability) and blood biomarkers (cortisol, DHEA-S, TNF-a, IL-6, IFN-a, IFN-g, prolactin, carnitine, TGF-b1, BDNF, MHPG, and HVA) were compared before and after the session. Results: Isometric yoga significantly reduced the POMS fatigue score ($p<0.01$) and increased the vigor score ($p<0.01$). It also reduced HR ($p<0.05$) and increased the high frequency power ($p<0.05$) of HR variability. Isometric yoga increased serum levels of DHEA-S ($p<0.05$), reduced levels of cortisol ($p<0.05$) and TNF-a ($p<0.05$), and had a tendency to reduce serum levels of prolactin ($p<0.1$). Decreases in fatigue scores correlated with changes in plasma levels of TGF-b1 and BDNF. In contrast, increased vigor positively correlated with HVA. Conclusions: Sitting isometric yoga reduced fatigue and increased vigor in patients with ME/CFS. Yoga also increased vagal nerve function and changed blood biomarkers in a pattern that suggested anti-stress and anti-inflammatory effects. These changes may be related to the fatigue-relieving effect of isometric yoga in patients with ME/CFS. It is also suggested that dopaminergic nervous system activation accounts for yoga-induced increases in energy in patients with ME/CFS.

No. 209

Improved Outcomes in Treatment-Resistant Depression With Concurrent rTMS and CBT

Poster Presenter: Andrew David Snyder, M.D.

SUMMARY:

he STAR*D trial demonstrated that only about half of patients suffering from depression are expected to remit entirely with adherence to medication. more effective, electroconvulsive therapy (ECT) is not as well?tolerated as repetitive transcranial magnetic stimulation (rTMS). Though cognitive behavioral (CBT) has been demonstrated an effective adjunct therapy with medication, relatively few data have been published on the effectiveness of concurrent The present study investigates the viability this

combination.Only patients with treatment?resistant unipolar depression who had failed 4 or more different antidepressant medications were recruited for this open label adjunct TMS study. At this time, 49 patients (35 female, 14 male; 44 Caucasian, 4 African Hispanic) were recruited for the study; 34 patients participated in the full 9?week course of 36 rTMS sessions. CBT was offered to all and administered majority of patients. MADRS, HAM?D, and PHQ?9 scores were recorded during each week as well as during a final follow?up visit 2?4 weeks later. Mental examination was conducted during each visit. CBT and rTMS treatment modalities were administered by the same mental health nurse practitioner. NeuroStar TMS machine was utilized to administer left prefrontal rTMS. CBT methods included introduction of the cognitive model, psychoeducation, cognitive distortions and core beliefs, and assistance with dysfunctional thought record worksheets. Preliminary analyses were conducted with Microsoft Depression scale scores with improvement of < 50% were recorded as "no response"; 50? 60% as "response"; and > 60% as "remission." When results the number of participants who successfully followed?up, 26 patients (~75%) were responders and 8 (~25%) were non?responders. Of the responders, demonstrated remission, 12 (34%) met criteria for response only. Since the non?CBT group is small, formal statistics have not been conducted at this of this study include that it is a retrospective analysis of an open? label clinical treatment sample and there was variability in the length of time that administered during each treatment session. However, when compared with other results in the literature, which shows average remission/response 30/40?50% range, rTMS + CBT appears to demonstrate greater efficacy than rTMS or CBT alone. Also, this combination therapy may demonstrate efficacy with higher tolerability. Ongoing side?by?side comparisons with other modalities seems merited.

No. 210

Effectiveness of ECT in Patients Hospitalized for Depression With Low and High Depression Symptoms

Poster Presenter: Hongbo He, M.D., Ph.D.

SUMMARY:

Introduction: Electroconvulsive therapy (ECT) is an effective treatment for patients with severe Major Depressive Disorder (MDD) and Bipolar Depression (BPDD). However, the difference in the effectiveness of ECT for patients with higher and lower levels of symptom severity has not been rigorously examined. Method: An observational study of symptom outcomes from admission to the time of discharge was conducted with 159 hospitalized patients diagnosed with MDD or BPDD at a large psychiatric hospital in China. Admission characteristics and symptom change were compared among 48 patients (30%) treated with ECT and 111 (70%) who were not. Symptom severity was assessed with the Hamilton Depression Rating Scale-17 item version (HDRS-17). In addition, patients were stratified by the median HDRS-17 symptom score at baseline. Analyses of covariance, adjusted for baseline group differences were repeated for less severe and more severe depression groups and the significance of the interaction of ECT treatment by depression severity was evaluated. Although patients treated with ECT showed no greater overall symptom improvement than others, significant differences were found in the highly symptomatic group with the ECT group having significantly lower HDRS scores at the time of discharge (10.3±1.6 vs. 15.0±1.1, Cohen's d=-0.55, p=0.025), adjusting for baseline differences. Two-way ANCOVA indicated that highly symptomatic patients showed significantly great benefit from ECT than less symptomatic patients (p=0.003). Conclusions: ECT appears to be effective in severely symptomatic patients with MDD or BPDD but not in a less severely ill group. This conclusion should be further evaluated in a stratified randomized trial.

No. 211

Yoga, Mindfulness, and Breathing Exercises as Coping Mechanisms for Children on an Acute Inpatient Psychiatric Unit: A Quality Improvement Project

Poster Presenter: Samantha B. Saltz, M.D.
Co-Authors: Yasin Bez, M.D., Dareen Hafez, M.D., Ariel Smith, B.S.N., R.N., Raul Johan Poulsen, M.D., Judith Regan

SUMMARY:

Background: Research has shown benefits of mindfulness on both the mental health and physical

wellbeing of children and adults (Gotink, 2015). Mindfulness in adolescents lowers perceived stress (Bluth, 2015) and yoga improves executive function in youth (Purohit 2016). **Methods**: Children under 18 who were admitted to Jackson Behavioral Hospital's inpatient psychiatric unit after July 2017 completed a questionnaire prior to engaging in a wellness group quality improvement project that taught children about the benefits of yoga, mindfulness and deep breathing. Following the group, children were asked to complete the Yoga Self Efficacy Scale (YSES)(Birdee, 2016). **Results**: 80 inpatient children with a mean age of 15.1±2.1 years and grades ranging from 2nd to 12th grade attended the 1-hour yoga training. Among them 38.8% (n=31) reported attending a formal yoga class earlier in their lives and 33.8% (n=27) reported trying yoga by themselves in the past. Most participants reported knowledge about mindfulness and belly breathing (62.5% and 66.3%, respectively). Mean total score of all children on YSES was 77.9±26.0 (min-max= 12-108) after yoga training. Girls and boys were similar in terms of mean age, school grade, and YSES score. There were no statistically significant differences in frequencies of reported attendance to an earlier formal yoga class, trying yoga independently in the past, and knowledge about mindfulness among girls and boys as well, however frequency of girls reporting previous knowledge about belly breathing was higher than that of boys (78.8% vs 57.4%, p=0.047, χ^2=3.94). When participants were split into 2 groups according to their knowledge about belly breathing, mean age, gender distribution, and school grade were similar among groups. The mean total YSES score was higher in the group who reported previous knowledge about belly breathing (81.9±25.8 vs 69.9±25.0 respectively, p=0.05). **Conclusion**: Considering that stress may lead to loss of emotional control and this often causes maladaptive behaviors in children, children who suffer from mental health pathology may benefit from learning coping mechanisms like yoga, mindfulness and breathing. Continued practice, implementation and use of strategies learned in this QI project may help lower stress levels in children and improve mental health.

No. 212

Frequency of Personality Disorder Diagnoses Prior to and After the Implementation of the *DSM-5* by Psychiatrists in an Inpatient Setting

Poster Presenter: Shabnam Sood, M.D.
Co-Authors: Michael Klemens, Ph.D., Gilbert Ramos, Bikash Bhattarai, Ph.D., Devna Rastogi, M.D.

SUMMARY:
There has been a significant shift in the diagnostic system with the introduction of the DSM-5 in 2013. The DSM-IV used a multi-axial system with major psychiatric diagnoses being recorded on Axis I and personality disorders recorded on Axis II. The DSM-5 has changed to a single axis system and diagnoses are recorded in the order of significance. The DSM-5 was released in 2013 and was implemented in our system in July 2014 and has now been used for the past two years. It is unknown if the change from the multi-axial to the single axial system has affected the frequency of personality disorders being diagnosed in an inpatient setting. If there has been a decrease in frequency of diagnosis, it could impact clinical outcomes and prognosis since patients with personality disorders may need to have a more specialized level of care. We hypothesize that with the dropping of multi-axial diagnostic presentation, personality disorders will be less commonly diagnosed in the single axis system than was previously the case and therefore important information that should be addressed is getting overlooked. Material and methods: The study is a retrospective chart review. Charts of patients admitted to the mental health inpatient units from 01/01/13 to 06/30/13 were reviewed for the final diagnosis on discharge and compared with patients admitted from 01/01/16 to 06/30/16. A sample of approximately 480 inpatients was randomly drawn from the six month period of 2013 that was prior to implementation of the DSM 5, and compared to a randomly selected sample of 480 inpatients admitted during the six month period of 2016 that occurred after implementation of the DSM-5. Descriptive statistics were calculated and variables were compared between the two periods using appropriate parametric and non-parametric statistical methods. Results: Gender distribution was similar in both the periods- 204 female and 276 male patients in 2013 compared to 201 and 279, respectively, in 2016 (p<0.896). Similarly, age distribution did not differ with a median age of 35 in

2013 and 36.5 in 2016 (p <0.247). There was a higher odds of personality disorder diagnosed in 2013 (odds ratio 1.89, p<0.001). 29% of patients were diagnosed with personality disorder in 2013 compared to 17.9% in 2016. Personality disorder, not otherwise specified(nos) was the most common diagnosis followed by Borderline Personality disorder and Antisocial Personality disorder. Within the patients with personality disorders, 'personality disorder, nos' was most commonly diagnosed in both periods: 91.7% (78/139) in 2013 compared to 41.2% (35/85) in 2016. Conclusions: Our study demonstrated a significant decrease in the number of personality disorders diagnosed with the single axis system. It is suspected that without the prompt to diagnose personality disorders, they may become less of a focus for providers to address. Additional investigation into this unintended consequence of this change is

No. 213

Three Red Flags: What's Wrong With Our Clozapine?

Poster Presenter: Eugene Gerard Breen
Co-Author: Faraz Khan

SUMMARY:

Clozapine needs no introduction as the number one anti-psychotic for difficult to treat schizophrenia. We have 15 patients on clozapine and during the last 12 months three of them received double red flags and had to stop. They were 17,13 and 7 years respectively on clozapine. This was unusual after such a long duration. We checked other services to see if they were having similar issues with the new generic versions of clozapine - but they were not. We checked the laboratories for lab error, but multiple labs were involved ruling out a particular problem with one lab. Subsequent management of these patients was fraught with difficulty and poor response. The literature on "clozapine withdrawal syndrome" is confined to case reports or studies of clozapine discontinuation, without any evidence for a protocol for such an event. 2 "Clozapine withdrawal syndrome" has a high morbidity and mortality. 1 The British Maudsley Guidelines which is the go-to reference book for psychiatric medication in UK, has no section on "clozapine withdrawal syndrome."3 The general advice from the literature is to prevent a cholinergic crisis by starting an anti-cholinergic. Cholinergic crisis causes most of the medical morbidity/mortality. Thereafter a trial of anti-psychotics is recommended. One of our patients settled into negative symptoms, one is on multiple anti-psychotics after a four month hospital admission, and one is still in hospital 6 months later with florid symptoms. The conclusion is that that there is nothing wrong with the clozapine, but the resulting "clozapine withdrawal syndrome" is a problem - it has no established management protocol. At least 45% of patients discontinue clozapine due to adverse effects, and 2-3% develop agranulocytosis or severe neutropenia causing a high incidence of "clozapine withdrawal syndrome " in the clozapine population". 4,5 The morbidity and mortality associated with this common syndrome should be factored in to any assessment of clozapine safety and efficacy and needs to be considered before any attempt is made to "de-regulate" and offer clozapine as a first or second line agent.6 Focusing exclusively on the successes of clozapine whilst ignoring the adverse consequences of the not uncommon "clozapine withdwaral syndrome" and its lack of established treatments, is to reach an erroneous risk benefit assessment. It suggests regulators need to exercise caution before allowing clozapine to be more freely available and marketed.

No. 214

New Technologies as a Risk Factor for Eating Disorders

Poster Presenter: Fernando Mora
Co-Author: Sonia Fernandez-Rojo

SUMMARY:

INTRODUCTION. Eating disorders (ED) have a significant prevalence in children and adolescents. The use of new technologies allows to access to a big amount of information. Excessive use of these technologies at this stage of life, decreases social and family relationships and provides access to online content in favour of these disorders, which can affect to the development of an ED. The aim of this study is to analyze the relationship between the use of new technologies and the risk of developing an ED. MATERIAL AND METHOD. We have selected a sample of 500 patients who were in the 2nd year of secondary school to which has been applied a

battery of scales, including the EAT-26 scale for ED; and has been collected sociodemographic data, including the use of internet and mobile phone. We used SPSS to analyze the relationship between these variables. RESULTS. We have analyze clinical and sociodemographic characteristics of the sample. In relation to the risk of developing an eating disorder we have found that high frequencies of use of the Internet and high frequencies of use of mobile phones (especially more than 4 hours a day) increases significantly the score in EAT-26 scale for ED ($p < 0.05$). CONCLUSIONS. Regarding the results, we can say that, in our sample, the use of internet and/or mobile phone more than 4 hours a day, significantly increases the probability of having a high score on the scale for ED. This data can be essential when planning treatment or establish a preventive strategy.

No. 215

The Impact of Self-Esteem on Eating Disorders

Poster Presenter: Fernando Mora
Co-Author: Sonia Fernandez-Rojo

SUMMARY:

INTRODUCTION Eating disorder (ED) are an important mental health problem because of theirs overall prevalence, especially in children and adolescents. Low self-esteem is considered, along with others, one of the risk factors for the development of these disorders, without having clarified the real impact of low self-esteem on the development of ED. The aim of this study is to analyse the relationship between self-esteem and the risk of developing an eating disorder. MATERIAL AND METHOD. We have selected a sample of 500 patients who were in the 2nd year of secondary school to which has been applied a battery of scales including the Rosenberg self-esteem scale, and the EAT-26 scale for ED. We used logistic regression using SPSS to analyse the relationship between both variables. RESULTS. In addition to analysing clinical and sociodemographic characteristics of the sample, we have found that for every decrease of 1 point in Rosenberg scale, there is an increased of 9% in the probability of being a case of ED for the EAT-26 scale ($p<0.05$). CONCLUSIONS. Regarding these results, we can conclude that, in our sample, having low self-esteem score, significantly increases the likelihood of having a high score on the scale of ED. This data can be useful in establishing a preventive strategy and an adequate treatment.

Poster Session 6

No. 1

Integrating *DSM*/ICD, Research Domain Criteria, and Descriptive Psychopathology in Teaching and Practice of Psychiatry

Poster Presenter: Dimy Fluyau, M.D.
Co-Author: Neelambika Sharanabasa Revadigar, M.D.

SUMMARY:

The Diagnostic and Statistical Manual of Mental Disorders (DSM) , the International Classification of Diseases (ICD), the Descriptive Psychopathology, and the Research Domain Criteria are three different approaches of understanding mental disorders.Both DSM and ICD endorse valid and rigid algorithms to classify psychiatric disorders.Descriptive Psychopathology incorporates differential interpretations of “a symptom” as psychological, neurological or neuropsychological. Avolition” can be a frontal syndrome or a depressive illness; “disinhibition” can be a frontal syndrome or mania.The Research Domain Criteria(RDoC) is a data-driven tool integrating neuroimaging, molecular, genetic, neuro-circuit and behavioral assessments, as well as cognitive sciences to diagnose and treat mental disorders. Woody et al. reviewed how depression research conducted within an RDoC framework focused on the negative valence systems construct of Loss(disruption within cortico-limbic circuitry). Genetically, the Loss construct focuses on monoamines (5-HTTLPR, 5-HT receptor genes, MAOA, and COMT). At the molecular level, Loss focuses on the roles of glucocorticoids, sex hormones , oxytocin, vasopressin, and cytokines. Physiologically, Loss is directed to a unit analysis of peripheral measures of autonomic nervous system , hypothalamic-pituitary-adrenal (HPA) axis, and neuroimmune dysregulation, and pupil dilation.The complexity of both DSM and ICD contents makes it sometimes difficult to conceptualize patient’s constellation of symptoms into a diagnosis.It seems like a checklist, but DSM remains a source of references, beyond billing purpose, a standard

system for teaching residents, diagnosing and researching in the United States of America. ICD is favored in many parts of the world as a clinical tool . Descriptive Psychopathology analyses a symptom to understand possible etiologies of that symptom such as the anhedonia can be an expression of either an hedonic response to rewards ("consummatory anhedonia") or a diminished motivation to pursue them ("motivational anhedonia"). This seems to be complicated for trainees and practicing psychiatrists. RDoC integrates multiple scientific disciplines in a translational manner to find underlying causes of mental dysfunction.RDoC is embryonic and seems futuristic.Cough can be found to be pneumonia, not all cough is pneumonia. Giving tylenol for fever(symptom) regardless of ceftriaxone(pneumonia). Paxil for depression and support for self-esteem. The integration of DSM/ICD, Research Domain Criteria, and Descriptive Psychopathology in teaching and practice of psychiatry is a solid theoretical framework of etiology, epidemiology, pathology of mental illnesses, and for diagnostic reliability .It enhances the quality of communication, and assist in more targeted researches for medications.

No. 2

Assessing Correlation Between the Quality of Residency Didactics and the PRITE Scores

Poster Presenter: Pooja P. Shah, M.D.
Co-Author: Abdelrahman Abdelaziz, M.D.

SUMMARY:

Results: A Pearson correlation analysis was conducted to determine the relationship between residents' perception of the preparation that the didactics lectures provide towards PRITE exams and their self-reported results. 22 valid surveys were evaluated out of a total of 29. The data analysis helped us understand whether the current learning strategies and improve quality of learning. The hypothesis tested was that there was no relationship between reported satisfaction with didactic and eventual PRITE scores. 10 out of 15 Domains produced results that demonstrated that some relationship may exist. However, none were statistically significant results with alpha set at the .05.

No. 3

Psychiatry in a State of Crisis: A Conceptual, Methodological, and Practical Critique

Poster Presenter: Drozdstoy Stoyanov, M.D., Ph.D.
Co-Author: Vincenzo F. Di Nicola, M.D.

SUMMARY:

Background: Psychiatry is considered to be a controversial field in its foundations (Maj, 2010; Kendler & Parnas, 2017). On one hand, critical considerations are raised about methodological limitations of the validity of evaluation methods and nosology. Those limitations may be explained by insufficient cross-disciplinary connections and incommensurable views on the mind-brain debate. In this view, the main components of psychiatric knowledge consist of taxonomy and methods. However, the limited validity of those components create a crises of identity, Psychiatric taxonomy in the post-DSM-III era has caused more troubles then resolutions, both on conceptual and empirical levels. Psychiatry has always inevitably engaged in theoretical debates. Escaping from them into instrumental quantifications of human narratives has been a flawed decision. On the other hand, from an ontological perspective these epistemological issues are secondary considerations and psychiatry is in crisis precisely because it allows itself to be "sutured" or yoked to its shifting methods. As a result, psychiatry's identity crisis is not a result of the difficulties of taxonomy and nomenclature but rather their cause. Methods: This critical literature review, from our forthcoming volume (Di Nicola & Stoyanov, forthcoming), examines psychiatry's crisis on both conceptual and methodological levels and outlines some practical possible solutions. Results: Psychiatry is in crisis due to a triad of critical gaps. First, psychiatry does not have a consensual science of persons that is not "sutured" to one view of psychology or one of the sub-disciplines of psychiatry. Secondly, psychiatry does not have a consensual general theory of clinical psychiatry beyond descriptive nosologies, such as the DSM or the ICD. And thirdly, psychiatry does not have a general theory of change as opposed to descriptions of change that are sutured to one or another approach. Conclusion: For renewal in psychiatry based on a theory of being, we must rethink how

theories are built in our field. There are three possibilities: (1) We can give up trying to create a foundation for psychiatry and dismiss psychiatry's difficulties as "pseudo-problems" and simply continue with descriptive projects like the DSM that NIMH's Insel dismissed as a dictionary. (2) We may argue that foundational theories of mind are weak, meaning that they are doomed to be pluralistic and incomplete, like psychiatry's eclectic biopsychosocial model. (3) Finally, to create a new foundation for psychiatry based not on what sorts of questions we have the tools to sort out, but on the nature of human being, we employ philosopher Alain Badiou's ontology, based on the Event, a theory of being and change (Badiou & Tarby, 2013). By separating psychiatry from its sub-disciplines, we free psychiatry to choose from among the methods, models, and sub-disciplines what is true and useful for its clin

No. 4

Home Visits: Where the Story Begins

Poster Presenter: Meredith Clark, M.D.
Co-Authors: Catherine Lee, M.D., Varsha Narasimhan, M.D., Madeleine S. Abrams, L.C.S.W.

SUMMARY:

Psychiatry is in the process of shifting to clinic-based and integrated care models. In the future, the role of many psychiatrists will be to serve as consultants for primary care physicians who treat patients with more serious and persistent mental health issues. People who have chronic mental illnesses also tend to have many more psychosocial problems. Likewise, those individuals also often have strengths and supports that are not apparent to providers in office treatment settings. In our New York City program, which serves a socioeconomically, racially diverse population, including many immigrants, residents are offered the opportunity to make home and community visits in their PGY-2 year to people with serious mental illness and their families/friends. Given the opportunity to visit patients in their homes, residents develop greater insight into how cultural and environmental factors interact with their recovery. Many authors have commented on pattern recognition as an intuitive, experiential and therefore rapid component of physician clinical reasoning, which is also influenced by rationality and analysis. As clinicians are expected to see patients in higher volumes and with more complicated presentations in the outpatient setting, pattern recognition becomes more valuable. We hypothesize that even if they do not continue to make home visits, residents have gained a basis to utilize patients' social contexts and to consider the way factors outside of the treatment setting have a profound effect on the daily lives of our patients. Methods: Cross-sectional self-report survey of PGY-2 to PGY-4 psychiatry residents including quantitative and qualitative measures assessing the impact of home visits on provision of care in settings including chronic inpatient wards and outpatient settings. Results: Pending completion of survey. Conclusion: Preliminary data from a cohort of residents support our hypothesis that home visits are an efficient way to teach the significance of cultural and environmental context. Residents report that this experience fosters faster, more comprehensive differential diagnosis and treatment planning in other treatment settings. No financial disclosures or conflicts of interest

No. 5

WITHDRAWN

No. 6

Promoting Mental Health Equity Within the South Asian Community: A Survey Assessing Current Practices Among Culturally Congruent PCPs

Poster Presenter: Simran Brar, M.D.
Co-Authors: Siddharth K. Shah, M.D., Glenda L. Wrenn, M.D., Farzana M. Bharmal, M.D.

SUMMARY:

The effect of cultural stigma on mental health services utilization among various racial/ethnic populations is well documented. Stigma prevents individuals from seeking mental health help for themselves and/or their family members. Individuals of Asian descent are one of the fastest growing racial/ethnic groups in the United States, yet understudied with regard to mental health utilization. One study in 2011 showed that this population is the least likely ethnic group to seek out mental health treatment even when severe symptoms are present. Culturally-based stigma has been identified as a primary reason for not seeking

treatment. Addressing this health disparity requires a culturally-informed understanding of stigma. We conducted a focused needs assessment among culturally congruent providers during the Indian American Psychiatric Association (IAPA) Atlanta Chapter monthly meeting in order to investigate the observed barriers and mental health needs of a local South Asian community in Atlanta, Georgia from the perspective of psychiatrists who live and work in the community of interest. These providers identified lack of knowledge of mental health symptoms and treatments as the primary strategy to combat stigma in the community. In addition, it was proposed that the South Asian community be approached at a primary care level where it may be better received. We are now conducting a survey among South Asian primary care providers to investigate current practices related to identification and education of mental health symptoms in the South Asian community. The survey will be distributed to members of the Georgia Association of Physicians of Indian Origin who are identified to be primary care physicians. Surveys will be developed in RedCap and distributed electronically. We will be using close comparative analysis to analyze the survey results. This poster will review our findings and summarize our survey results with descriptive statistics. This represents a step in formulating culturally appropriate education and interventions at a primary care level to mitigate stigma and promote mental health equity within the South Asian community.

No. 7
WITHDRAWN

No. 8
Gene Analytics Pathway Analysis of Genes Affected by Alcoholism
Poster Presenter: Snehal Kadia
Co-Authors: Ann Manzardo, Merlin Butler

SUMMARY:
Abstract: Gene Analytics Pathway Analysis of Genes Affected by Alcoholism. Purpose: The risk for developing Alcohol Use Disorder (AUD) is influenced by genetic, epigenetic and environmental factors. Chronic alcohol use and abuse also alter gene expression profiles broadly impacting cellular functioning at the tissue and organ level. The overlapping influence of these combined factors determines the course of physiological and psychological illness which are associated with AUD. Understanding the converging functional impact of genetic factors in alcoholism should help guide treatment developments. Methods: Our previously published list of gene biomarkers for AUD (N=337) and through an updated comprehensive search of published literature of genes we found a total of 346. The updated list of genes was analyzed using GeneAnalytics computer software programs for pathway analysis and genetic profiling of related tissues and cells, diseases, super-pathways, Gene Ontology (GO)-biological and GO-molecular processes. GeneAnalytics powered by Gene Cards provided rank scores that were subdivided into categories (e.g., diseases, tissues, pathways and phenotypes) derived from the number of overlapping genes and the nature of the gene-disease association, tissue specificity, abundance and

No. 9
Sexual Abuse in Childhood and Its Consequences: Drug Addiction Profile, Psychiatric Comorbidities, and Sexual Behavior
Poster Presenter: Emi Carneiro Bragiato
Co-Author: Claudia Dallelucci

SUMMARY:
Background: abundant evidence suggests that sexual abuse during childhood is associated with higher rates of psychiatric disorder such as post-traumatic stress disorder, various personality disorders, substance abuse, depression, and anxiety. Object of study: The selected population for this study was composed of people who under treatment for drug addiction. The research investigated the conditions under which the participants consumed drugs, then compares the sexual behavior among those who reported an instance of sexual violence in childhood with that of the individuals who did not experience being a victim of sexual abuse. Finally, the work inspects the prevalence of psychiatric comorbidities. Methodology: The population was composed of a sample of 620 adults (age between 18-78) who sought the Program of Orientations and Attendance for Drug Addicts (PROAD – Federal University of Sao

Paulo, Brazil) to treat alcohol, marijuana, crack, or cocaine addiction between 2008 to 2016. 86% were men and 14% women. The participants answered questions about substance consumption, SRQ-20, Beck Scales for Depression and Anxiety, and completed an inventory of sexual behavior. Participants were separated into two groups: one consisting of those who reported sexual abuse during childhood (Group 1) and another of those who did not report such abuse (Group 2). The results were then compared. Results: on the use of psychoactive substances, 81% (p value 0.002) of Group 1 reported using multiple drugs. 77% of those in the same group also reported having problems with cocaine; 67% described cocaine as their favorite drug. By comparison, among participants in Group 2, 47% (p value 0.007) described cocaine as their favorite drug, while another 47% reported alcohol as the preferred drug (among Group 1 this number was 33%). Group 1 presented a higher prevalence of psychiatric co-morbidities: 81% (p value <0.001) exhibited severe symptoms according to SRQ-20 Scale; 58% (p value 0.004) had severe symptoms according to the Depression Inventory; and 42% (p value < 0.001) in the Anxiety Scale, against 59%, 38% and 21% in Group 2, respectively. Regarding questions about their sexual behavior, 44% of Group 1 stated having sex without protection with someone who might have HIV. In Group 2, 23% answered positively to

No. 10

Exploring the Self-Rating Depression Among Treatment Seeking Male Alcoholics: Which Symptoms Were the Most Prominent and Persistent?

Poster Presenter: Gordana Mandic Gajic

SUMMARY:

Background:The most frequent determinant for relapse in the treatment of alcoholics is depressive mood, but there is a challenge for clinicians to screen depression symptoms on admission and to anticipate whether these symptoms will be temporary or persistent. For this reason the most prominent and persistent self-rating depressive symptoms were analyzed in order to recognize depression in alcoholics during early abstinence. Methods: The prospective 8-weeks clinical study was conducted in one hundred consecutively recruited male in-patient alcoholics (age 25–60). The Beck Depression Inventory-BDI was used for assessing depressive symptoms at three following times: on admission (t0) and repeated after 4th week (t1) and after 8th week (t2) of the abstinence period. Student t-test, chi-square test and repeated measures ANOVA were applied ($p<0.05$). Factor analysis of BDI simptoms extracted only mood factor interpretable in this sample, thus BDI symptoms frequency were analysed. Results: This analysis included 86 patients in final sample (mean age=43.3). BDI score was 14.20±9.56 and indicated average mild depression on admission (t0). The repeated measures ANOVA showed significant severity lowering on t1 and t2. In the following course of abstinence depression was registered in 59.7% alcoholics on admission and in 30.2% and in 16.3% after 4 weeks and after 8 weeks, respectively. At baseline the most prominent symptoms were self-blame, punishment, anhedonia, agitation, irritability, guilt, insomnia, sadness and fatigue, but after eight weeks the self-blame, anhedonia and guilt were the most prominent. Conclusion: The majority of male alcoholics had a mild-degree depression on admission with significant severity lowering during early abstinence. The self-blame, anhedonia and guilt were the most prominent and persistent among symptoms in the course of early abstinence. Except for the evaluation of depression severity, routinely depression self-rating would be useful for exploring emotional depression content for planning tailored integrative therapy among alcoholics during early alcohol abstinence.

No. 11

WITHDRAWN

No. 12

Intravenous Buprenorphine/Naloxone Abuse in a Pregnant Patient

Poster Presenter: Ketan A. Hirapara, M.B.B.S.
Co-Author: Erin Zerbo, M.D.

SUMMARY:

Background: Buprenorphine/naloxone (BNX) was introduced in 2002 for the treatment of opioid use disorder. As a partial agonist, buprenorphine (BUP) has a ceiling effect and is much safer in overdose as

compared to full opioid agonists such as methadone and heroin. However, as with any opioid, BUP can be abused as well. The combination product of BNX was developed in order to decrease the risk of intravenous abuse, since naloxone will become bioavailable once injected and interfere with the "high" that users experience. In survey study done at a needle exchange program in Finland (2007), 68% of BNX IV users reported a bad experience, and BUP alone was the most frequently used IV drug for 73% of the respondents. Here we present the uncommon case of case of IV BNX abuse in a pregnant patient. Case Report: A 30 year-old 30 week pregnant female was admitted to ob service for abdominal pain. Psychiatry was consulted as the she endorsed IV BNX use for three weeks prior to admission. She reported crushing tablets and injected IV after mixing it with water. She had h/o IV heroin use 2 bags daily a few months prior to this admission, but she quit once she became pregnant, abstinent for 5 months. Due to worsening psychosocial stressors, she had opioid cravings and wished to relapse on heroin, but was unsure how to procure it. Instead, she was able to obtain BNX tablets from her cousin. She experienced euphoria, described as a "calm and detached from reality feeling." Upon admission, her use ceased and she developed withdrawal symptoms within several days. She agreed to sublingual treatment with the BUP (it is preferred in pregnancy), but she required an emergent C-section due to fetal distress shortly afterward and so required full-agonist opioid medications instead. Upon psychiatric follow-up, recommendations were made to limit opioid pain medication as an outpatient and she was also referred to methadone clinic. Discussion: IV abuse of BUP is well documented in the literature so the combination product BNX was developed to minimize the potential of abuse and diversion. However, there is still a concern as BNX itself has been abused IV as well. This will most likely occur in opioid-naïve patients, since its partial agonism will prevent a strong peak effect. Our patient described both the euphoric and anxiolytic properties typical of opioids, and its strong effect on her was possible given her recent abstinence. IV BNX use should be safer than IV buprenorphine in terms of overdose risk, but injection risks such infectious diseases and site infections remain. Our patient is at high risk of ongoing IV use after discharge. This requires a careful stratification of risks and benefits while prescribing BNX for such a patient. Although the overdose risk remains low, ongoing IV use carries a number of risks and perpetuates an addictive "lifestyle." A preferred option would be directly observed dosing such as that found in an opioid treatment program.

No. 13

Investigation of the Association Between Suicidal Behavior and Illicit Substance Use in Schoolchildren: A Systematic Synthesis of Empirical Data

Poster Presenter: Maria Nystazaki
Lead Author: Maria N. K. Karanikola
Co-Author: Prodromoula Zisimou

SUMMARY:
Background: Substance use among adolescents has been identified as a public health issue, associated with broad physiological, psychosocial and economic impact, as well as self-injury, including suicidal thoughts, suicidal attempts and completed suicides in the young. Aim: The aim of this study was to investigate the association between suicide behavior and illicit substance use among schoolchildren 10-18 years old. Methods: A systematic review of the literature published between 2007 and 2017 was performed to locate empirical studies, published in the English language, investigating the association between illicit substance use and suicidal behavior. PubMed, EBSCO, Health Source and Web of Science were searched in the period between September and December of 2016. Finally, 20 retrieved articles matched the inclusion criteria set for the present review, while all studies included in the review were assessed for their methodological rigour by the CASP checklists. Findings: The present review underlines a strong association between suicidal behavior and illicit substance use in schoolchildren, based on 20 empirical studies. Although suicidal behavior is a multi-parameter phenomenon, illicit substance use was strongly associated with suicidal behavior, even when controlled for psychiatric and substance use symptoms. Conclusions: Coexistence of substance use and suicidal behavior must be undermined by care providers in every encounter. Most importantly, clinicians should be aware of the importance of

substance abuse screening in adolescents experiencing suicidal behavior and via versa.

No. 14

Association Between Suicide Attempt and Binge Drug Use Among People Who Inject Drugs

Poster Presenter: Maykel Farag Ghabrash

SUMMARY:

BACKGROUND: While an elevated risk of suicide attempt is well documented among people who inject drugs (PWID), the overall danger posed by binging, a high-risk pattern of drug use remains unclear. In the following study, we assessed the association between suicide attempt and binge drug use in a prospective cohort of PWID in Montreal, Canada. METHODS: 1240 participants were interviewed biannually and were asked to complete questionnaires pertaining to sociodemographic data, pattern of substance use (cocaine, amphetamine, opioids, sedative-hypnotics, alcohol, and cannabis) and psychosocial factors between 2004 and 2011. Generalized estimating equations (GEEs) model was used to evaluate the relationship between binge and suicide attempt while controlling for type and pattern of substance use, sociodemographic characteristics and related markers of mental health. RESULTS: At baseline, 17.9% participants (mean age±SD:38.2±9.8) reported binging during the past 6-months. PWID who reported binge were significantly younger (P<0.001), less educated (P=0.012), less likely male (P=0 .047), and had shorter history of injection (P<0.001). Participants reported higher rates of prostitution and psychological disorders (P=0.003), and were younger at first injection (P=0.014). In the GEE multivariate model, Binge was independently associated with attempted suicide (adjusted odds ratio [aOR 95% CI] = 1.91 [1.38-2.65], P<0.001). CONCLUSIONS: Individuals who binge represent a particularly vulnerable subgroup among PWID. Future research should be customized to better understand the complex interplay between mental health and substance misuse, especially among multi-problematic high risk populations such as PWID.

No. 15

The Results of the Clinical Trial of Odelepran (Kappa Antagonist) for the Treatment of Alcohol Addiction

Poster Presenter: Elvira Mukhametshina

SUMMARY:

Ondelopran is a novel potent antagonist/inverse agonist at kappa, mu and delta opioid receptors. Here we present some of the results from Phase III GCP-complied clinical study of ondelopran 125 mg QD in patients with alcohol dependence. The study has completed and analysis of the full dataset of information is ongoing. Here we present efficacy results in subgroup of female patients. In combination with a psychosocial intervention aimed at reinforcement of motivation for sobriety ondelopran significantly reduced mean daily total alcohol consumption ($p < 0.05$), and the number of heavy drinking days per month ($p < 0.05$) versus placebo. Ondelopran also increased mean percentage of days of abstinence per month to 91.2% (almost complete abstinence) that was by 6.1% higher than in placebo group ($p < 0.01$). The most significant superiority of ondelopran over placebo was found for the assessments of craving with Obsessive-Compulsive Scale (? < 0.001) and Visual Analogue Scale ($p < 0.01$). By the end of the study the proportion of patients with improvement in the overall clinical evaluation with CGI-I scale was significantly ($p = 0.01$) higher in ondelopran group (91.6%) than in placebo group (72.5%). CGI-I scale performance index also was significantly ($p < 0.01$) higher in ondelopran group. Ondelopran was well tolerated and safe. Gastrointestinal adverse events were the most frequent in ondelopran group (16.4% if compared to 8.4% in placebo group ? < 0.01). These preliminary results suggest ondelopran to be a novel and effective treatment for alcohol dependence.

No. 16

Characteristics of Heroin Users: A Comparative Study of Intranasal Versus Intravenous Routes of Administration

Poster Presenter: Sharron Spriggs, M.A.
Co-Authors: Edwin Salsitz, Yasmin Hurd, Ph.D.

SUMMARY:

Introduction: Heroin use and overdose have increased dramatically in recent years to a level of epidemic proportion. An intravenous route of administration had been the most common method

of use with more people switching over time to an intranasal administration. Factors such as heroin purity, cost, and environment influence the preferred route of administration. Also, intravenous heroin use is associated with significant medical co-morbidities, including HIV and Hepatitis C infection, endocarditis, and increased risk of overdose. Few studies have investigated psychiatric and medical characteristics in relation to preferred route of administration. Methods: Clinical data was obtained by retrospective chart review from 2014-2016 of patients admitted into the chemical dependency detoxification unit at Mount Sinai Beth Israel. Of a total of 534 patients, 227 were intravenous users and 275 were intranasal users. Demographic information, patterns of drug use, withdrawal symptoms based on subjective self-report and the clinical opioid withdrawal scale (COWS), psychiatric and medical history was evaluated. Non-parametric and parametric statistical analyses were performed to determine group differences for the different parameters. Results: Demographic factors were similar between groups for gender and race/ethnicity. The results show that intravenous users began drug use at a significantly younger age (22.38 years versus 25.23 years; P=0.001) than intranasal users. Additionally, intravenous and intranasal users significantly differed by reported duration of heroin use (24 versus 17.21 years; P =0.001). Moreover, intravenous users consumed more heroin (2.41 versus 1.85 units; P=0.001). The clinical opioid withdrawal scale revealed significant mean score withdrawal differences among groups (5.54 versus 4.96; P=0.036) with greater withdrawal symptoms observed in intravenous users. There were no significant differences in psychiatric comorbidity between groups. Anxiety was the most commonly reported psychiatric comorbidity for both intravenous and intranasal users (~ 40%). In regard to medical outcomes, infectious disease such as hepatitis was more common among intravenous users (73.6% versus 5.66%; P=0.001) than intranasal. Interestingly, hypertension was found to be more prevalent among intranasal users (33.9% versus 0; P=0.001). Conclusion: In patients who currently use heroin, hospitalized at a similar point during their opiate withdrawal period, the results showed that intravenous users differ in in regard to their withdrawal symptoms and patterns of reported drug histories. The longer duration and greater amount of heroin use might account for the more severe withdrawal symptoms. The current data suggests that an intranasal route of administration still carries significant psychiatric and medical consequences. Hence irrespective of the route of administration, heroin use disorder has important health concerns.

No. 17

Depression and Substance Use Disorder: Two Faces of the Same Coin? A Case Report

Poster Presenter: Sara Cabello de Alba Cabello de Alba

Co-Authors: Mario De Matteis, Isabel Alonso Gonzalez, Ignacio Basurte-Villamor, Pablo Vega, Nestor Szerman, M.D.

SUMMARY:

Background: The co-ocurrence of depression and substance use is very common, and several theories tried to explicate this relationship, including the overlapping of neurobiological pathways. Evidence from animal research reveal that mu, delta and kappa opioid receptors (MORs, DORs and KORs, respectively) exert different roles over mood-related processes. Buprenorphine (BPN), a mixed opioid drug, agonist for mu (MOR) and antagonist for kappa (KOR) opioid receptors, produces behavioral responses that are similar to those of antidepressant and anxiolytic drugs. In some studies it has been used for refractory depression and depression-addiction comorbidity. This case report exemplifies the efficacy of buprenorphine in a patient with major depression (without previous response to sertraline) and opioid and alcohol use disorder. Objective: To suggest the possibility of treatment with buprenorphine in patients with depression and co-ocurring opioid and alcohol use disorders. Methods: Case report and review of literature. Discussion: A 56-year-old Spanish female, with history of alcohol and opioid use disorder, reports low mood in her first visit to our outpatient unit of Psychiatry. The patient describes symptoms of major depression (DSM-5). She has been sad and apathetic for eight months, and feels disappointed with feelings of worthlessness and guilt, and often has suicidal thoughts. She usually uses alcohol (beer and wine, up to 100 grams per day) and oral codeine (pills, up to 210 mg per day). She has been treated with

sertraline, 200 mg per day, for four months, without improvement. Considering the role of the opioid system in both depression and addiction, we decided to add buprenorphine (4 mg/24 h). The patient showed progressive improvement in depressive symptoms, and reached abstinence of alcohol and codeine. Now, she is asymptomatic and has been abstinent during the past four months. Conclusion: There is evidence supporting the role of the opioid system in regulating reward system and mood. This neurobiological system has been involved in mood disorders and could play a key role in the pathology and treatment of two severe psychiatric disorders, addiction and depression. For these reasons, in adult patients with alcohol and opioid use disorders and depression, buprenorphine therapy could be an option not only for addiction but also for depressive symptoms. More studies are needed, but results of this case report can help to design clinical trials in co-ocurring depression and substance use disorders in the future.

No. 18

Ethical Challenges in the Management of Repeat Deliberate Foreign Body Ingestion

Poster Presenter: Victor Nettey, M.D., M.P.H.
Co-Authors: Olanrewaju Ezekiel Olukitibi, M.D., M.P.H., Ayesha Ashraf, M.D.

SUMMARY:
Mr. B., a 39-year-old African-American male with a past psychiatric history of bipolar disorder, polysubstance use disorder (alcohol, opiate, benzodiazepines and cocaine), history of incarceration, multiple hospital visits significant for potential for secondary gain, who self-presented to our Medical ED a day after being released from prison, requesting psychiatric medications and reported feeling suicidal. Patient was transferred to the psychiatry ED where he reported depressive symptoms with suicidal ideations and command auditory hallucinations. He was managed in the psychiatric ED and subsequently on the medical and psychiatric floors. During his stay, patient deliberately swallowed multiple foreign objects, alerted staff of his actions, demanded imaging and endoscopic removal under sedation and repeatedly requested benzodiazepines and pain medications. The patient described the endoscopic removal as painful and subjectively distressing. Recurrent ingestion of all sorts of objects (plastic forks, buttons, bolts) continued surreptitiously, despite constant close observation and complications such as hematemesis and abdominal pain. During the initial part of his hospitalization, the ingestions was perceived as a suicidal attempt. Patient received multiple imaging, had three separate endoscopic procedures with removal of multiple different foreign objects and lots of pain medications. Patient was confronted on inconsistencies in his symptomatology and he subsequently recanted his depressive and psychotic symptoms. Obtaining collateral information was key to the disposition of this patient. Despite the adoption of multidisciplinary team approach with incorporation of behavioral contracts, management of this patient was extremely challenging and raised many ethical concerns among the treatment team. In this poster, we highlight the ethical challenges of managing a patient who deliberately and repeatedly swallowed foreign objects as a form of drug seeking behavior.

No. 19

The Association Between Lifetime Cannabis Use and Dysthymia Across Six Birth Cohorts

Poster Presenter: Ofir Livne
Co-Authors: Liat Razon, Jürgen Rehm, Deborah Hasin, Ph.D., Shaul Lev-Ran

SUMMARY:
Background: Though high rates of co-occurring cannabis use and depression are well-documented, data regarding the association between cannabis use and dysthymia is scarce. The aim of this cross-sectional study was to explore clinical correlations of cannabis use among individuals with dysthymia, as well as the changes in the association between cannabis use and dysthymia across six decades of birth cohorts. Methods: Data were drawn from wave 3 (2012-2013; N=36,309) of the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC). Participants were divided into six birth cohorts (1940s-1990s), based on their decade of birth, and individuals with dysthymia were further categorized by 3 levels of lifetime cannabis use: non-users, cannabis users without a Cannabis Use Disorder (CUD) and those with a CUD. We compared rates of co-occurring psychiatric and

substance use disorders among cannabis users vs non-users and conducted logistic regression analyses in order to determine the odds of dysthymia among cannabis users across six decades. Results: Rates of several psychiatric and substance use disorders were higher among individuals with dysthymia who used cannabis compared to those who did not. The interaction between cannabis use (without a CUD) and birth cohort was associated with a decrease in the odds of dysthymia (OR=0.90, 95% CI 0.84-0.97) and remained significant after controlling for confounding variables. Similar changes over time were not demonstrated for cannabis users with a CUD. Limitations: Likelihood for recall bias and misclassification based on cross-sectional nature of the study and on respondents' self-reports of symptoms throughout their lifetime. Conclusions and Implications: Our study's findings demonstrate that the association between cannabis use (but not CUDs) and dysthymia has weakened over time. These findings highlight the need for further research examining changes over time in the relationship between cannabis use and associated psychiatric disorders.

No. 20

Marijuana: Innovating the Health Message Through Social Media Marketing

Poster Presenter: Oyedeji Ayonrinde, M.B.A., M.B.B.S.

SUMMARY:

Background: In Canada, important legislative and policy changes regarding marijuana are imminent, allowing growth and retail of marijuana for recreational use. This will potentially increase availability, including to youth. Early and frequent cannabis use in young people are recognized risk factors for the development of psychosis and schizophrenia. The Canadian Psychiatric Association and the Canadian Medical Association recommend a minimum age of 21-years for consumption of cannabis. However, proposed legislation (18-19 years) and current use in youth are inconsistent with this. The challenge has been how to effectively communicate health messages to this target group through an appropriate and acceptable medium. Approximately 90% of youth report social media use and in recent years, Instagram has become one of the fastest growing information and networking platforms with about 76% of teens on Instagram, 75% on Snapchat and Facebook (66%). Social media and online advertisements can increase exposure of advertising and present opportunities for credible 'viral' dissemination of health information. This project was implemented in partnership between an Early Psychosis Intervention Program (Heads Up!) and a student-run marketing team at the Smith School of Business, Kingston, Ontario. Aim: To develop a social media public education and health awareness campaign targeted at youth highlighting the potential physical, social, and mental health risks associated with cannabis use. Method: A target population of high school students (Grades 7-12) within Eastern Ontario (24.4% annual cannabis use) with a focus on the Kingston area. An Instagram persona, was developed incorporating cannabis use into daily lifestyle with peers. At the end of the series, a more detailed 'backstory' utilizing Instagram's ability to post multiple photos at once, presented alternative narratives highlighting potential adverse scenarios and empathically engaging followers in cannabis associated risks. Platform users connected with both the persona demography and familiar landmarks. Social media analytics tools were used to evaluate target audience reach, demography and geographical locations. In addition, the degree of engagement, followership and comments gave key insights. Optimum activity times informed times to post key messages. Results: Campaign followers were predominantly in 13-17 and 18-24 age ranges, well aligned with the intended positioning. Over half (55%) were female and 45% male. Highest engagement hours were during the weekend and lowest midweek. Daily engagement peaked between 6:00 pm and 9:00 pm. In 7 days, there were 2504 impressions (total number of times post seen) which tripled over the next few weeks including 60 reaches (new accounts) per day. The final post reached 99.2% of the followers and was positively received with discussions and 691 impressions. Conclusion: Social media are an effective health awareness tool in targeting youth.

No. 21

Effects of the "Built Milieu" on Patient Experience in the Psychiatric Ward: Multidisciplinary Analysis,

Model, and Prototype
Poster Presenter: Neel Jaysukh Lalkiya
Co-Author: Timothy R. Kreider, M.D., Ph.D.

SUMMARY:
An understudied component of the therapeutic milieu in psychiatric wards is the built design of the unit - the configuration of space, color, furniture, and other architectural elements that may be overlooked as background but surely have impact on patient experience much like the behavioral and psychosocial structures in the ward. Clinically relevant factors that may be influenced by the "built milieu" include aggressive behaviors, self-harm behaviors, positive patient-staff interaction, patient satisfaction, and severity of symptoms like anxiety and paranoia. The dearth of studies on the effect of psychiatric ward design on patient experience is understandable given the impracticality of controlled experimentation on such factors. We review studies of the effect of design on inhabitants in the field of architecture and for various non-psychiatric institutions, such as schools and prisons, that similarly require a balance between maintaining safety and creating a positive environment. Based on this multidisciplinary analysis, we propose a model for the built milieu in which three types of factors influence patients' behavior and experience: blueprint, furnishings, and atmosphere. Applying this model, we designed a prototype of a psychiatric ward designed from the ground up to take advantage of the effect of built milieu on patient experience. More pragmatically, we present a list of low-cost changes that could be made in existing psychiatric wards to improve the patient experience while still maintaining safety.

No. 22
Prevalence of Anxiety in Postural Orthostatic Tachycardia Syndrome (POTS) Patients
Poster Presenter: Nabihah Chaudhary
Co-Author: Sami B. Alam, M.D.

SUMMARY:
Background: POTS is form of Dysautonomia associated with a heterogeneous array of symptoms and many other co-morbidities. POTS is frequently misdiagnosed for other conditions because it commonly presents with concomitant symptoms that mimic those associated with those conditions. In the past, it was mistakenly believed to be caused by Anxiety. However, modern researchers have determined that POTS is not caused by Anxiety. Many POTS patients come in having previously seen a Psychiatrist and already having been diagnosed with General Anxiety Disorder or Panic Attacks. The reason for the misdiagnosing being the thought that the Anxiety/Panic causes the episodic Increased Heart Rate rather than the Increased Heart Rate causing the Anxiety/Panic. Research has shown that POTS patients are similarly or even less likely to suffer from Anxiety or panic disorder than the general public. Previous research data has shown how POTS can impair one's quality of life physically, mentally, and socially. The symptoms of POTS are vast because the Autonomic Nervous System plays an extensive role in regulating various functions and pathways throughout the body. The symptoms of POTS are vast because the Autonomic Nervous System plays an extensive role in regulating functions throughout the body. The aim of this study is to determine the frequency of Anxiety present in POTS patients. Method: 792 POTS patients were randomly selected from our clinic. Patients' electronic medical records were reviewed retrospectively for diagnosis of Anxiety. Results: Out of 792 POTS patients, 85.6% are female (678) and 14.4% are male (114). 25.75% of those 792 patients are diagnosed with Anxiety (204); out of which 86.3% are female (176) and 13.7% are male (28). Conclusions: POTS patients are often misdiagnosed with Anxiety as many of the symptoms overlap. Our data suggests that even after having this overlap, patients are separately diagnosed with POTS (Tilt table test criteria) and anxiety (DSM IV criteria). POTS symptoms should not be neglected by diagnosing with Anxiety. Further clinical studies are required to broaden the area of these discrepancies.

No. 23
Prevalence of Depression in Patients With Postural Orthostatic Tachycardia Syndrome (POTS)
Poster Presenter: Sami B. Alam, M.D.
Lead Author: Nabihah Chaudhary

SUMMARY:
Background: POTS is form of Dysautonomia associated with a heterogeneous array of symptoms

and many other Co-morbidities. POTS is frequently misdiagnosed for other conditions because it commonly presents with concomitant symptoms that mimic those associated with those conditions. Many POTS patients come in having previously seen a Psychiatrist. Previous research data has shown how POTS can impair one's quality of life physically, mentally, and socially. The symptoms of POTS are vast because the Autonomic Nervous System plays an extensive role in regulating various functions and pathways throughout the body. The aim of this study is to determine the incidence of depression present in POTS patients. Method: 792 POTS patients were randomly selected from our clinic. Patients' electronic medical records were reviewed retrospectively for the diagnosis of depression. Inclusion criteria for POTS patients was a positive Tilt table test and abnormal Autonomic function tests; Depression based on DSM IV criteria (Pre-diagnosed from Psychiatric Clinics). Results: Out of 792 patients, 85.6% are Female (678) and 14.4% are Male (114). 9.72% of those 792 patients are diagnosed with Depression (77); out of which 92.9% are Female (71) and 7.792% are Male (6). All POTS patients were asked about social and psychological factors on initial and subsequent follow up visits. Conclusions: Depression can lead to poor quality of life which is one of the associated symptoms in POTS patients and detailed history and examination should be carried out for proper treatment and improvement of quality of life in POTS patients.

No. 24

Prevalence, Correlates, and Comorbidity of Anxiety Disorders in Chifeng City of Inner Mongolia Autonomous Region, China

Poster Presenter: Yueqin Huang
Co-Authors: Xing Guan, Zhaorui Liu

SUMMARY:
Background: Chifeng is the largest population city of Inner Mongolia Autonomous Region, but no epidemiological characteristic of anxiety disorders are available. This study is aim to describe the epidemiological characteristics and correlates of anxiety disorders in community residents aged 18 years and over in the Chifeng City of Inner Mongolia Autonomous Region. Method: 6376 individuals aged 18 years and over were sampled using stratified Probability-Proportional-to-Size Sampling in Chifeng City in 2011. All respondents were investigated by face-to-face interview. The Composite International Diagnostic Interview-3.0 computer assisted personal interview (CIDI-3.0-CAPI) was used to make diagnoses based on the criteria and definition of the fourth edition of the American psychiatric association diagnostic and classification manual of mental disorders(DSM-IV). Results: A total of 4528 subjects completed the CIDI-3.0-CAPI.The 12-month adjusted prevalence rate was 3.96% (3.15-4.78); the lifetime adjusted prevalence rate was5.70% (4.71-6.70). Respondents with anxiety disorders had significantly increased ORs for chronic back or neck problems (OR =1.95), frequent or severe headaches (OR =1.48), any other chronic pain (OR =1.56), and ulcer in stomach or intestine (OR =1.57). Conclusion: Anxiety disorders are the commonest mental disorders in Chifeng City of Inner Mongolia Autonomous Region. It is a prominent public health problem. People with more anxiety disorders may be associated with chronic pains or ulcer problems. Carefully assessing the physical illnesses for patients with anxiety disorders should be aware in the clinical practice.

No. 25

A Descriptive Epidemiological Study of Disability Prevalence Attributed to Neurotic Disorders in China

Poster Presenter: Rui Shen
Co-Authors: Xing Guan, Hongguang Chen, Yueqin Huang

SUMMARY:
Background: There have been several regional cross-sectional surveys in neurotic, but few studies have reported about neurotic attributable disabilities in china. This study estimated the prevalence, correlates,severity and functional impairment of disabilities attributed to neurotic disorders in the Chinese population. Method: Data from a representative national sample of 2,526,145 noninstitutionalized residents was obtained from the Second China National Sample Survey on Disabilities (CNSSD) in 2006. The data was analyzed to estimate prevalence, correlates, severity and functional impairment of disability attributable to neurotic disorders by gender, age, region, etc. Results: The

disability prevalence attributed to neurotic associated was 0.32‰ (805/2 526 145) in China. Women, rural residents, unemployed, low educated and those who were divorced or widowed showed higher prevalence rates than their counterparts. Proportions of mild, moderate, severe and extremely severe of neurotic attributed disability accounted for 78.48%, 9.14%, 6.5% and 5.9%, respectively. Conclusion: Prevalence rates of disability attributable to neurotic disorders vary greatly among different population and regions. Multiple disabilities of neurotic disorders attributed disability with other sorts of disabilities can bring much more impairment to individuals.

No. 26

Emetophobia—the Specific Phobia of Vomiting: Two Case Studies With One-Year Follow-Up

Poster Presenter: Sultana Jahan

SUMMARY:

INTRODUCTION: Emetophobia is an intense, irrational fear of vomiting. This specific phobia can also include subcategories; a fear of vomiting in public, a fear of seeing vomit, a fear of watching the action of vomiting or fear of being nauseated. The prevalence rate of Emetophobia in a community sample has been estimated to 8.8 % with a female to male ratio 4:1. Very limited research has been done on Emetophobia. It can occur at any age and can have a chronic course affecting one's academic/carrier, family, and social life. Even though it a relatively common phobia, knowledge of its treatment especially pharmacologic is lacking. METHODS: Case 1: B. was a 7 year old female referred by her pediatrician for psychiatric evaluation for her intense fear of vomiting. Mother shared that B's overwhelming fear of vomiting started when she was 6 years old and it may have stemmed from an incident when one of B's cousins threw up inside their van. At school, B constantly monitored whether or not anybody was getting sick around her. She did not eat lunch at school cafeteria, as she was anxious that she might throw up. If she found out, someone was sick she began screaming and crying. B's mother received calls from school on an almost daily basis due to B's behavior. B's academic performance was negatively affected due to her intense irrational fear. Even at home she was constantly asking how everybody was physically feeling and any potential ailments would cause her to have an emotional breakdown. Case 2: P was a 12 year male patient referred by his pediatrician for psychiatric evaluation after receiving 4 days inpatient treatment on the pediatric unit for dehydration. Patient reported that he was afraid of vomiting and gradually stopped eating and drinking. When he did not eat or drink anything for 3 days he became so dehydrated that he was hospitalized. Several months prior to his hospitalization he suffered from flu and during that time he had intense vomiting and since then he has been fearful of a recurrence of the vomiting. After a complete psychiatric evaluation, emetophobia diagnosis was established for each patient. A review of literature suggested that sertraline, paroxetine, venlafaxine were potentially useful for specific phobia. Based on limited information, both patients were treated with sertraline. Results: B and P both started with initial dose of sertraline 12.5mg daily and then increased gradually over a period of next few months. From the very beginning B & P responded well with sertraline. B and P continued sertraline 50mg daily and 25mg daily as a maintenance treatment respectively. At 1 year follow up visit both of them were symptoms free. These are only 2 case studies, future research should investigate further whether or not sertraline can effectively treat emetophobia.

No. 27

Variation in Prolactin Levels With Aripiprazole and Risperidone: What Is the Clinical Significance?

Poster Presenter: Sultana Jahan

SUMMARY:

Methods: A clinical chart review was completed in youth treated with SGAs over a period of six months. The main SGAs used in the clinic were aripiprazole & risperidone. Data pertaining to demographics, duration of treatment, prolactin level, polypharmacy & dosage were collected & analyzed. Descriptive data analyses, t-tests & Pearson coefficients were used in the analysis. Literature was reviewed to understand the physiological role of prolactin in the body. Results: The aripiprazole group (n = 24) had a mean prolactin level of 3.2 and median and mode of 2.8. The risperidone group (n = 33) had a mean prolactin level of 27.9, a median of 25.7 and mode of

37.6. The prolactin level in the aripiprazole group was much lower than normal lab reference values, in contrast to the prolactin level in the risperidone group. The aripiprazole group was also associated with a lower risk of hyperprolactinemia (0%) in contrast to the risperidone group (86% in males, 61% in females). An increased dose of aripiprazole was associated with an increased prolactin level (Pearson coefficient 0.53). Increased age was also associated with an increase in prolactin though no levels were above normal. No such relationship was present in the risperidone group. Conclusions: As was expected in the literature for adults & youths; risperidone was associated with increased prolactin & aripiprazole with decreased prolactin. The potential of side effects of hyperprolactinemia with risperidone has been widely addressed (i.e oligomenorrhea, amenorrhea, infertility, sexual dysfunction, osteoporosis, gynecomastia) but effects of hypoprolactinemia with aripiprazole on developing youths has been under studied and often gone unnoticed. Hypoprolactinemia can greatly influence the growth and development of young patients. Long term low prolactin can lead to delayed puberty, subfertility and infertility as well as immune depression. Further studies are necessary to enhance our knowledge of aripiprazole induced hypoprolactinemia & its effects on growth and development of children and adolescents and also essential to develop practice guidelines.

No. 28

Highly Anxious Panic Patients Avoid Risk-Taking Behavior?

Poster Presenter: Kyoung-Uk Lee

SUMMARY:

Objectives: It is well known that panic disorder is associated with a high risk for suicidal behaviors. Another notable feature of individuals with panic disorder and other anxiety disorders is a reduced tendency to show risk-taking behaviors. It seemingly contradicts the findings of increased risk of suicidality in panic disorder, because suicide is the most risk-taking act that human can make. Thus, we aim to experimentally examine how individuals with panic disorder (PD) and healthy controls (HC) show risk-taking behaviors when exposed to negative emotional stimuli. Methods: 18 patients with PD and 14 healthy volunteers participated in this study. First, Beck Depression Inventory (BDI) and the State-Trait Anxiety Inventory (STAI) were assessed. Participants were then exposed to 6 pictures with negative valence which were selected from the International Affective Picture System (IAPS). The pictures were presented for 60 seconds, 10 seconds each to induce negative emotion on the computer screen. Next, participants conducted the Balloon Analogue Risk Task (BART) which is a computerized program to measure risk-taking behavior. In the task, a participant pumps the presented balloon up by pushing a keyboard button. Each pump inflates the balloon incrementally and points are accumulated until some uninformed thresholds at which the balloon explodes. A participant can also stop and "cash out" prior to the balloon explosion and save points rather than losing points from the trial. Thus, each pump involves greater risk and also greater reward. After one practice trial, 30 balloons were given. We used two variables from the task: the adjusted mean pumps (AMP) which excludes exploded balloon and the within-subject intertrial variability of pumps at "cash out" divided by AMP (VARAMP). AMP is known to measure risk-taking tendencies and VARAMP is known as a behavioral index of self-control over risk-taking behaviors. Results: The mean age of participants was 42.9±29.0 for PD and 23.7±4.0 for HC. Also, 8 (44.4%) male, 10 (55.6%) female participants with PD and 3 (21.4%) male, 11 (78.6%) female controls were included. Both groups did not show significant differences in BDI, STAI, AMP, and VARAMP. However, correlation analysis revealed reverse relationships in two groups. There were significant negative correlation between SAI and VARAMP in PD ($r = -.590$, $p = .01$) and significant positive correlation in HC ($r = .726$, $p < .01$); significant negative correlation between TAI and VARAMP in PD ($r = -.529$, $p < .05$) and significant positive correlation in HC ($r = .561$, $p < .05$). Conclusion: The present study suggests different modulating functions of anxiety for risk-taking behaviors in panic disorder and healthy control. That is, high state anxiety in patients with panic disorder may increase self-control over risk-taking behavior. Future studies are needed to investigate cognitive mechanism which contribute to suicidality in people with panic disorder.

No. 29

The Frequency of rs4988235 Polymorphism in MCM6 Gene in Children With ASD

Poster Presenter: Maja Czerwinska-Rogowska
Co-Authors: Karolina Dec, Dominika Jamiol-Milc, Karolina Skonieczna-Zydecka

SUMMARY:

Autism is a neurodevelopmental disorder characterized by a social-interraction difficulties, repetitive behaviors and impaired communication abilities. Gastrointestinal defficiency, abdominal discomfort, pain and aberrant behavior are very common in children with ASD and they might be connected with lactose intolerance. Lactase is an enzyme found in the small intestine that catalyze the breakdown of lactose into the monosaccharides. Lactase is encoded by LCT gene located on chromosome 2 but its expression depends on the close-lying gene MCM6 (minichromosome maintenance complex component 6). MCM6 contains two regulatory regions for LCT gene. A single-nucleotide polymorphism rs4988235 (C/T) in MCM6 gene is associated with lactose intolerance. The aim of this study was to determine the frequency of rs4988235 polymorphism in children with ASD. The study group consisted of 69 children with ASD while the control group consisted of 58 healthy individuals. Genomic DNA was isolated from the swabs taken from the inside of the cheek using a commercial isolation kits. The identification of rs4988235 polymorphism in MCM6 gene was performed by Real-Time PCR method using the TaqMan technology. The results of this study showed differences in the frequency of rs4988235 polymorphism in children with ASD in compare to healthy control subjects. This may be the cause of lactose intolerance and gastrointestinal disorders in children with ASD and affect their behavior.

No. 30

Cariprazine in Autism Spectrum Disorder and Intellectual Disabilities

Poster Presenter: Lee Steven Cohen, M.D.

SUMMARY:

This is the first clinical report of the use of Cariprazine, a second generation orally administered atypical antipsychotic compound in patients with Autism Spectrum Disorder (ASD) and Intellectual Disability (ID). Risperidone and Aripiprazole have been studied in autistic patients and are FDA approved for the treatment of irritability associated with autism, but studies of newer agents are limited. Studies recently showed that Lurasidone was not successful in treating irritability associated with ASD. We studied eight patients diagnosed with ASD and/or ID from our developmental disability clinic, some of whom have concomitant severe behavioral issues characterized by aggression, impulsivity, and self injurious behavior. One case was co-morbid with cerebral palsy and two cases were co-morbid with seizure disorder. The sample included 2 female and 6 male cases. Mean patient age of the sample was 38 years old (range 15 to 64 years old). Mean length of time on Cariprazine was 4.5 months (range 1 to 7 months). Mean titrated total daily dose was 1.88 mg (range 1.5 to 3.0mg). Cases were retrospectively chart reviewed for Clinical Global Impression Severity Scale (CGI-S) before initiating Cariprazine and Clinical Global Impression Improvement Scale (CGI-I) and Clinical Global Impression Efficacy Scale (CGI-E) after initiating Cariprazine. Mean CGI-S of the sample was 5.75 (range 5 to 7), which correlates with marked to severe illness, and mean CGI-I of the sample was 2.13 (range 1 to 4), which correlates with minimal to much improvement. Three patients were very much improved (1), two patients were much improved (2), two patients showed minimal improvement (3), and one showed no change (4) after clinical review by a board certified psychiatrist. A similar pattern arose using the CGI-E. Mean CGI-E of the sample was 5.0 (range 1 to 13), which correlates with moderate therapeutic efficacy. One patient showed no efficacy of the drug (13), five patients showed moderate efficacy of the drug (5), and two patients showed marked efficacy (1). Overall, 87.5% of patients treated with Cariprazine showed improvement in clinical functioning. Cariprazine may function as an alternative compound for improvement in impulsivity, aggression, and self-injurious behavior in the treatment of patients diagnosed with ASD or ID who have failed currently approved compounds. This retrospective chart review indicates the potential need for more controlled studies to evaluate cariprazine in these diagnostic groups.

No. 31

Construct Validity of CATAT Scoring System as an Implicit Probe of Suicidal Thoughts and Behavior

Poster Presenter: Dorin Levy
Co-Authors: Shira Barzilay, Ph.D., Kayla DeFazio, Lisa J. Cohen, Ph.D., Igor I. Galynker, M.D., Ph.D., Zimri Yaseen, M.D.

SUMMARY:
Introduction: Despite its widespread use, the Thematic Apperception Test (TAT) has rarely been used systematically as a clinical instrument that can assess imminent suicide risk. Suicide is a leading cause of death around the world. Although considerable clinical and research efforts aim to treat and prevent suicide, rates of suicidal behavior have not improved. A number of measures for assessing imminent suicide risk exist. Most are explicit measures, including self-report questionnaires and clinician interviews, which are reliant on patient self-disclosure. Projective assessments such as the Thematic Apperception Test offer an alternative assessment tool that can reduce the problem of self-disclosure bias. The CATAT coding system was developed to provide a psychometrically valid system for scoring the TAT. In this study, we test the sensitivity to suicidal thoughts and behavior of select CATAT subscales on two images likely to elicit suicidal themes: Card 3BM (showing a person crumpled against a bench with an indistinct object that might be a handgun alongside) and Card 3GF (a woman in a doorway with head bowed and her hand to her face). We hypothesized a positive relationship between self-reported suicidal behavior severity and CATAT ratings. Methods: This study employs a cross-sectional, correlational design to examine associations between the CATAT dimensions of depression and suicidality and suicidal thoughts and behavior as measured by the Columbia Suicide Rating Scale (CSSRS). Psychiatric inpatients (n=166; ages 18-65) were assessed for recent and lifetime history of suicide behavior. A composite score of suicidal phenomena, incorporating ideation and behavior, was calculated from the CSSRS data. Participants were also asked to provide a story in response to the stimulus pictures taken from the Thematic Apperception Test. Two reliable coders who were unaware of the participant's psychiatric history scored the TAT responses on the depression and suicidality scales. The average inter-rater reliability, using Cohen's Kappa, across the two cards was .80 for the depression rating and .91 for suicidality. Results: Consistent with our hypothesis, a combined score of the CATAT depression and suicide scales scores for Card 3BM and Card3GF was significantly correlated with lifetime (.22, p=.003) and past month (r=.30, p=.002) suicidal phenomena. The CATAT depression subscale was also significantly correlated with lifetime (r=.20, p=.008) and past month (r=.27, p=.004) suicidal phenomena. Conclusion: The CATAT coding system appears to be a reliable and valid implicit measure of suicidal thought and behavior in high-risk psychiatric patients. It might be more sensitive to acute vs. chronic risk.

No. 32

High Fat and High Cholesterol Diet Changed Propionic Acid and Butyric Acid Levels in Rat Model

Poster Presenter: Dominika Maciejewska
Co-Author: Agnieszka Lukomska

SUMMARY:
Background: Short chain fatty acids (SCFA) are products of anaerobic bacteria fermentation of resistant starch and dietary fiber. The Acetic (C 2:0), butyric (C 4:0) and propionic acids (C 3:0) play an important role in maintaining the proper pH, absorption of calcium, magnesium and iron in the intestine, and they also beneficially affect the metabolism of glucose and proteins in the liver. The imbalance between these acids can also cause several neurological disorders. Materials and Methods: 36 Male Sprague–Dawley rats were fed a high fat diet (HFD) consisting of 88 g of a normal diet, 10 g of lard oil, and 2 g of cholesterol. Control rats were fed a normal diet. The rats were killed 2, 4, 8, 12, 16 and 20 weeks after HFD exposure. During every section, rat feces were collected and SCFA were analyzed using gas chromatography. Results: Rats fed with HFD showed a significant decrease in butyric acid and a significant increase in propionic acid concentration compared to the control group. We also observed a strong negative correlation of butyric acid and propionic acid levels in the study group (RHO = 0,76, p<0,05). Significantly, changes in the SCFA profile appeared after only 2 weeks of the

diet (C 3:0 – 51,77% ± 2,73% vs 20,65% ± 5,64%, C 4:0 – 6,2% ± 2,71 vs 32,18% ± 10,66%) and were maintained in all groups. Discussion: HFD caused rapid changes in the intestinal microbiome, resulting in SCFA skewed production. There is permanent and bidirectional communication between intestine and brain via gut-brain axis. As SCFAs were shown to affect metabolic pathways, such as histones deacetylation, the modulation of G protein-coupled receptor and mitochondrial metabolism, these changes may be involved in pathogenesis and/or clinical course of multiple neuropsychiatric disease

No. 33

Ecopipam as a Pharmacological Treatment of Stuttering

Poster Presenter: Michele A. Nelson, M.D.
Co-Authors: Gerald Maguire, Jeannie D. Lochhead, M.D., Roberto Castaños, M.D.

SUMMARY:
Stuttering is a chronic neuropsychiatric disorder that affects one percent of the population. Stuttering begins in childhood and persists, in most cases, throughout the lifetime. Spontaneous recovery can occur in younger children but by the age of eight years, if still present, the symptoms tend to continue through adulthood. Stuttering, also known as Childhood Onset Fluency Disorder, can greatly impact an individual's social, occupational and academic functioning. Unfortunately, current forms of speech therapy are associated with relatively low response rates and high rates of relapse. In recent years, stuttering has been found to be amenable to pharmacologic treatment (Maguire et al. 2000; Maguire et al. 2004; Maguire et al. 2004). A past Phase IIb trial of pagoclone in the treatment of stuttering enrolled over 330 subjects in just two weeks with no formalized advertising for the trial. Such rapid enrollment for a stuttering medication study provides strong evidence for this population's need for more advanced treatment options (Maguire et al. 2010). Ecopipam, does not carry any FDA approved indications. Ecopipam acts as a selective dopamine D1 receptor antagonist, and has little affinity for D2 receptors. It has no reports of parkinsonian-like extrapyramidal symptoms typically seen with D2 antagonists. Dopamine receptor antagonists are effective in improving stuttering. This poster will discuss the results of an open label study to examine efficacy and tolerability of Ecopipam in Adults with Childhood Onset Fluency Disorder (Stuttering). Stuttering is a condition that typically starts in childhood and affects millions of people. The hypotheses are as follows: Ecopipam effectively reduces stuttering symptoms as measured on the SSI-IV total score, the CGI-I, CGI-S, SSS and OASES and Ecopipam is a well-tolerated medication in the treatment of stuttering.

No. 34

Off-Label Transcranial Magnetic Stimulation: Treatment of Illnesses Other Than Major Depressive Disorder (MDD) and MDD Using Off-Label Parameters

Poster Presenter: James Paul Halper, M.D.
Co-Author: Alan Z. A. Manevitz, M.D.

SUMMARY:
TMS therapy was FDA-approved in 2008 for Major Depressive Disorder (MDD). We have treated over 600 patients. We have treated over 150 patients with disorders other than MDD with TMS therapy and over 100 patients with MDD using off label stimulation parameters. These include Bipolar Disorder (mainly depressed but also manic). Generalized Anxiety Disorder (GAD), MDD associated with Prominent Anxiety, Obsessive Compulsive Disorder (OCD), PTSD, Depression associated with neurological disorders & Fibromyalgia. In general, TMS treatment of Fibromyalgia, Bipolar and GAD have yielded excellent results similar to those seen with MDD patients. Fibromyalgia patients were treated with stimulation of Left Dorsal Prefrontal and Motor Cortices. Bipolar depressed patients were treated with Left Dorsal Prefrontal LDLPFC in the same way as were patients with MDD. Patients with GAD were treated with right sided slow TMS. One of our 5 OCD patients remitted. This was the only patient who clearly had one major obsession. We are currently assessing use of theta burst & cingulate stimulation for patients who have failed to respond to other forms of TMS. Many patients are on medication and their effects will be reviewed. In addition to these off label uses we have treated many MDD patients with parameters other than those approved by the FDA. The most common deviation is extending the number of treatments,

second was the addition of bilateral treatment sites. On occasions, we also increased frequency and rarely intensity. We will discuss indications and outcomes for these deviations. Many labs are using Neuroimaging including QEEG to identify networks & connections correlated with TMS response. We propose to try nonstandard protocols and stimulation targets on subjects predicted to be non-responders. The potential role of Neuroimaging including QEEG will be discussed. For example, we started treating one aphasic patient with TBI by suppressing right sided Broca homologue, which is the most common protocol for stroke induced aphasia. When this led to deterioration in residual speech we re-examined his MRI which revealed virtually total loss of left language area with relative preservation of right language homologues. TMS activating right language areas led to improved speech Clearly there is a role for off-label TMS. We will discuss other possible indications e.g. neurological disorders with and without depression there is considerable evidence for its efficacy in Parkinson Disease associated depression. While the results with pain are mixed the current opioid epidemic is a compelling reason to reexamine this. Aside from treating pain per see there is considerable evidence that it may treat addiction. It also may be efficacious for smoking cessation and weight controls. These indications will be reviewed. Major roadblocks for these treatments will be insurance & approaches to this will be discussed.

No. 35

Biological Stress Markers in Relocated Hurricane Survivors: Heartrate Variability, Interleukin-2 and Interleukin-6 Related to Depression and PTSD

Poster Presenter: Phebe Mary Tucker, M.D.
Co-Authors: Daniel Zhao, Ph.D., Sarah E. Johnston, M.S., Qaiser S. Khan, M.D., M.P.H.

SUMMARY:

Background: Heart rate variability and cytokines are among biomarkers of stress and trauma increasingly studied in clinical research. We examined heart rate variability (HRV), Interleukin-2 (IL-2, promoting cell-medicated immunity) and Interleukiun-6 (IL-6, with pro-inflammatory, pro-immunologic and other roles), assessing relationships of biomarkers with psychiatric diagnosis after hurricane exposure. Relationships of interleukins with HRV were assessed to determine whether biological changes co-occurred after trauma. Methods: 34 Katrina survivors relocated to Oklahoma and 34 demographically matched controls not on psychiatric, cardiovascular or inflammatory medications were assessed for diagnosis (SCID-IV). Baseline serum IL-2 and IL-6 were sampled before psychometric assessments. Power spectral analysis of HRV was measured before and during a trauma script to determine HRV reactivity to trauma cues. ANOVA and Spearman correlations analyzed data. Results: 16 survivors had PTSD, 14 had major depression and 12 had both diagnoses. Survivors had higher baseline sympathovagal and lower parasympathetic HRV activity, and lower parasympathetic HRV reactivity (test minus pre-test scores) than controls. Survivors with depression and PTSD had flattened parasympathetic reactivity to trauma cues compared to participants without these diagnoses. Survivors did not differ from controls in IL-2 or IL-6, and survivors with PTSD and depression did not differ in interleukins from participants without these disorders. Comparing biological stress measures, among survivors with depression only, sympathetic reactivity correlated negatively with IL-2 and parasympathetic reactivity correlated positively with IL-2. No significant correlations were found for IL-6. Conclusions: Differences in HRV emerged after hurricane exposure, and among survivors with depression and PTSD. Differences in IL-2 and IL-6 were not identified related to trauma exposure or survivors' PTSD or depression. In comparing stress measures, our findings of higher sympathetic reactivity associated with lower levels of immunologic IL-2 supports that these biological measures of stress co-occurred in depressed survivors. Our results of higher immune-promoting IL-2 with higher [protective] parasympathetic activity in depression is consistent with a health-promoting role of this cytokine. Among clinical implications of our findings, HRV reactivity appeared to more sensitively capture hurricane exposure and development of PTSD or depression than assessed cytokines. Also biological stress measures of higher sympathetic HRV reactivity co-occurring with lower immune-promoting IL-2 may indicate a double biological "hit" to some depressed trauma survivors, perhaps rendering them more vulnerable to

immunologic, inflammatory or cardiovascular sequelae. Lack of significant correlations of IL-6 with HRV measures in our findings is consistent with a potential complex, pleiotropic role of this cytokine.

No. 36

An Open Study to Evaluate the Impact of Stimulants on the Cardiovascular and Metabolic Risks in Adult Patients With ADHD

Poster Presenter: Adel Amin Gabriel, M.D.
Co-Author: Ryan Lam

SUMMARY:

BACKGROUND: Coronary artery disease (CAD) is the dominant source of morbidity and mortality worldwide (WHO, 2002). The risk of dying from heart diseases increases in patients suffering from major psychiatric disorders. Adult ADHD patients specifically are at higher risk for cardiovascular disease because of the comorbidy with other psychiatric disorders. OBJECTIVE: To examine changes of cardiovascular and metabolic risks, including cholesterol profile, and HBA1C levels in adult ADHD patients, before and after stimulant medication treatments. The objective of this study is to evaluate and compare the results from the current study with those of a previously published research, which found that stimulants may result in a favorable lipid profile changes (1). METHOD: Participated in this study male and female sample (n-68) of consenting consecutive outpatients. Excluded from the study, those who suffer from endocrinopathies, those with chronic liver, or renal disease and those who suffer from eating disorders. All patients received stimulants for 12 weeks. The majority of patients (n= 59/68) received the pro-amphetamine preparation lisdexamfetamine. Primary outcomes included the lipid profile measures. Other clinical outcome measures included; the adult ADHD self report scale (ASRS-v1.1) symptom checklist, the Clinical Global Impression (CGI), heart rate, blood pressure, BMI, the fasting glucose, and HBA1C. ASRS-v1.1 and CGI were completed at baseline, at 4 and at 12 weeks of treatment. The cardiovascular and metabolic measures were gathered once before the ADHD stimulants were initiated and at twelve weeks of treatment. The study was granted approval by the Conjoint Scientific and Ethics Board at the University of Calgary. RESULTS: The repeated measures analysis of variance (ANOVA), was utilized to examine changes in the ASRS-vi.i, and CGI over time. The paired t test, was utilized to examine changes in the cardiovascular and metabolic variables (pulse, blood pressure, weight, BMI, lipid profile, HB A1c, and fasting blood glucose), at 12 weeks of treatment. There was significant ($p < .001$) improvement of ADHD symptoms and the Global improvement measures over time. At 12 weeks there was significant reduction ($p < .01$) in the LDL measure. There were also significant decrease ($p < .001$) in weight, in BMI, and in heart rate. However there were no significant changes in the fasting glucose, in the HBA1C parameters, or in other lipid measures. CONCLUSION: Stimulants used in adults with ADHD are associated with minor, but statistically significant changes in the cardiovascular and metabolic risk factors. Findings in the current study are consistent with findings in previous research. The complex relationship between the ADHD comorbities, the cardiovascular metabolic risks and genetic risks factors will be discussed.

No. 37

Evaluating the Psychometric Properties of the Job-Satisfaction Survey (JSS) in Adult ADHD Patients: The Adult ADHD JSS

Poster Presenter: Ryan Lam
Lead Author: Adel Amin Gabriel, M.D.

SUMMARY:

INTRODUCTION: Adult ADHD is well known common psychiatric disorder, and is frequently associated with functional and employment impairments among employed adults. The Job Satisfaction Survey (1) consists of thirty six items, which was found to have a high reliability and an evidence for validity in different research sittings. However its psychometric properties has not been evaluated in adult ADHD patients. OBJECTIVES: The objective of this project is to examine the psychometric properties of the Job Satisfaction Survey in adult patients with ADHD. METHOD: Participated in this study male and female consenting consecutive outpatients (18 - 65 years, N = 87) with confirmed diagnosis of ADHD. All patients were holding regular employment. All patients were administered the Job Satisfaction Survey (items = 36), before ADHD treatment was initiated.The

Attention Deficit Hyperactivity Disorder Quality- of -Life Scale (AAQoL, 29 items) (2), was utilized to examine concurrent validity. The study was granted approval by the Conjoint Scientific and Ethics Board at the University of Calgary. RESULTS: After several exploratory principal component analyses were conducted on the 36-item survey, it was decided to exclude four items resulting in a new modified 32-item instrument. Factor analysis applied to the modified instrument resulted in three significantly correlated, and theoretically meaningful factors accounting for 51% of the variance, in responses related to patients' job satisfaction. There was evidence for convergent validity of the survey subscale scores, and an evidence for concurrent validity with the (AAQoL). Internal consistency reliability for the modified instrument is 0.88 (Cronbach's alpha).The development of the final version of the modified survey will be discussed. CONCLUSION: There is evidence for high reliability of the modified Job-Satisfaction survey when tested in adult ADHD patients. There is also an evidence for convergent and discriminant validity and there is concurrent validity with the (AAQoL). The Job Satisfaction Survey could be used reliably to measure job satisfaction among adult patients suffering from ADHD. The Job-Satisfaction survey could be used in research and by employers to assess employers areas of dissatisfaction, and deal with them accordingly, with the goal of improving the overall work productivity.

No. 38

Completed Suicide in Bipolar Disorders: Analysys of Risk Factors in Spanish Sample of Patients After First Lifetime Hospitalization

Poster Presenter: Evaristo Nieto
Co-Authors: Santiago Biel, Clara Isern

SUMMARY:

INTRODUCTION: Bipolar disorder is the mental disorder with the higher ratio of suicide ,almost thirty times over the general population (1). Therefore, it is of special interest to determine the risk factors that may be associated with a future completed suicide in these patients (2) OBJECTIVES : 1-To determine the rate of completed suicide in bipolar patients after the first hospitalization 2-To determine the risk factor of completed suicide in bipolar patients after the first hospitalization METHODS We included all patients admitted to our Psychiatric Unit between 1996 and 2016 for the first time in their life and diagnosed according to DSM IV criteria of Bipolar Disorder (N=328). -All these patients were followed in our Hospital as outpatients from discharge until today for an average of 10,5 years. -Bipolar patients were classified according the follow up in two groups -Bipolar whit completed suicide (N=18) -Bipolar without completed suicide (N=310) We compared the variables between the groups using Chi square in qualitative variables and using the Student T test in quantitative variables RESULTS One hundred fifty one bipolar inpatients were men (46%) and 177 women (54%). The mean of age was 39,1 years. Sixty three patients had Bipolar II disorder (19,2%) and 265 had Bipolar I disorder (80,8%) . One hundred seventy six patients were in manic phase (53,8%), 77 in mixed phase (27,2%) and 53 in depressive phase (19%). In the follow up , 18 of bipolar patients made completed suicide (5,5%). Most of 90% used a violent method mainly precipitation (7 patients) or hanging (5 patients). The mean of age when the patients completed suicide was of 45 years. The mean of years between first hospitalization and completed suicide was 6, 8 years (range 0,1 -19 years) The basal variables during hospitalization significantly associated by suicide group were suicide attempt immediately before hospitalization, especially when it was violent or of serious lethality, depressive phase during hospitalization , treatment with antidepressants during hospitalization , and to have Bipolar II disorder. CONCLUSIONS: Followed during an average of ten years after the first hospital admission 5,5% of bipolar disorder patients completed suicide . Bipolar disorder II, serious and violent attempted suicide before admission and treatment with antidepressants during hospitalization, are risk factors of completed suicide.

No. 39

Positive Psychology Interventions as a Novel Treatment Method in Patients With Bipolar Disorder: A Pilot Study

Poster Presenter: Melissa Chrispijn
Co-Author: Anja Stevens, M.D.

SUMMARY:

Background Bipolar disorders (BD) are characterized by a cyclic pattern of mood episodes, in which the depressive mood episodes last three times longer than the manic mood episodes. Current BD treatment consists of pharmacological and psychotherapeutic options and is mainly targeted on reducing (hypo)manic or depressive symptoms. Positive psychology interventions (PPIs) focus on promoting human strengths and not so much to correct deviations or disorders. PPIs have found to increase wellbeing but also to decrease depressive and anxiety symptoms in a non-clinical population. The main goal of this study was to select the 12 exercises that were rated best for the upcoming trial using PPIs in BD patients. Methods BD patients were asked to participate in this pilot study by their psychiatrist (AS). They were sent the PPI book "This is your life" together with a list of 24 exercises from the book that were to be discussed during the group meetings. Three 3-hour meetings were planned in 3 subsequent weeks. Prior to each meeting the patients were asked to read and fulfill 8 exercises, which were discussed with each other during the meeting led by the researcher (MC). The patients were asked to rate each exercise on a Likert scale from 1 to 5, 1 being negative and 5 being positive score. Furthermore, they were asked to record the average time spent on each exercise. Finally, also free space was left for comments and suggestions on how to improve the exercises for future use. Results We asked 8 BD patients in a euthymic phase to participate in this pilot study, 5 patients agreed to participate in the study (4 in a group and 1 in an individual trajectory). The 4 patients (2 female, 2 male) participated in all three meetings. The other (female) patient completed the 24 exercises in one week with e-mail and individual contact with the researcher. All 5 five patients have completed and rated the prescribed exercises. The results varied strongly between the different exercises as well as between patients within the group. However, some exercises were unanimously found unsuitable for BD patients. No mood episodes occurred during the time of the pilot trial, as well as during the following 3 months. Conclusion In this pilot trial PPIs were well received and did not cause mood exacerbations up to 3 months after the pilot study was performed. We selected 12 PPI exercises for the upcoming trial with PPIs in BD patients.

No. 40

Daily Electronic Monitoring of Subjective and Objective Measures of Illness Activity in Bipolar Disorder Using Smartphones: The MONARCA II Trial

Poster Presenter: Maria Faurholt-Jepsen

SUMMARY:

Background: Patients with bipolar disorder often show decreased adherence with mood stabilizers and frequently interventions on prodromal depressive and manic symptoms are delayed. Recently, the MONARCA I randomized controlled trial investigated the effect of electronic self-monitoring using smartphones on depressive and manic symptoms. The findings suggested that patients using the MONARCA system had more sustained depressive symptoms than patients using a smartphone for normal communicative purposes, but had fewer manic symptoms during the trial. It is likely that the ability of these self-monitored measures to detect prodromal symptoms of depression and mania may be insufficient compared to automatically generated objective data on measures of illness activity such as phone usage, social activity, physical activity, and mobility. The Monsenso system, for smartphones integrating subjective and objective measures of illness activity was developed and will be tested in the MONARCA II trial. Methods: The MONARCA II trial uses a randomized controlled single-blind parallel-group design. Patients with bipolar disorder according to ICD-10 are included and randomized to either daily use of the Monsenso system including an feedback loop between patients and clinicians (the intervention group) or to the use of a smartphone for normal communicative purposes (the control group) for a 9-month trial period. The trial was started in September 2014 and ends in January 2018. The outcomes are: Differences in depressive and manic symptoms; rate of depressive and manic episodes (primary). Results: Will be presented at the APA congress 2018

No. 41

The Gender Difference in the Relationship Between Chronotype and Problematic Drinking Behaviors in Mood Disorder

Poster Presenter: Jayoung Kong

SUMMARY:

Purpose: The incidence of problem drinking behavior or alcohol use disorder is high in patients with mood disorders such as mood disorders or bipolar disorder, and it worsens the course of mood disorders. Therefore, it is important to deal with the alcohol problem in mood disorders. There are many factors – age, gender, depressive symptom and chronotype of eveningenss - contributing to problematic drinking. But, it seems that male and female have different reasons for drinking alcohol. And there is little study to investigate this differences in mood disorder. We aimed to investigate the different contributor for alcohol drinking behaviors according to gender differences drinking in mood disorder patients. Methods One hundred eighty-six patients were recruited(male, n=87; female, n=99). Participants in this study were patients with major mood episodes. Alcohol drinking was assessed by Alcohol Use Disorder Identification Test (AUDIT), severity of depressive symptom was assessed by Beck's Depression Inventory(BDI) and chronotype was assessed by Composite scale of Morningness(CSM). We compared the AUDIT scores, BDI, CSM, age and education year between male and female with independent t-test, the association between AUDIT and other factors according to gender with Pearson's correlation. And we compared AUDIT scores according to chronotype in female patients by ANOVA (Analysis of variance) . Results: There were no group differences in basic clinical variables and AUDIT scores. In female patients, chronotype was associated with alcohol drinking (r= -0.217, p=0.007), not age, education year or severity of depressive symptom. And eveningness of chronotype have higher AUDIT scores than other chronotypes (F=3.791, p=0.026). But in male patients, alcohol drinking was not associated with chronotype like the other factors. Conclusion: We have examined how gender can control this relationship between chronotype and problematic drinking. In this study, these findings suggest that eveningness of chronotype - that rather than age, education year and severity of depressive symptom- is associated with problematic drinking in female patients who suffer from mood disorder. And it may suggest that chronotherpeutic medication or modulation of chronotype –Interpersonal social rhythm therapy (IPSRT)- of female patients can be helpful on their course. But in male patients, the effect of chronotype on problematic alcohol drinking was not founded. It seems that male patients have more multiple causes -impulsivity, coping strategies and so on - for drinking alcohol. Therefore in the future A large-scale study is needed to confirm these results.

No. 42

Investigation of Clinical Factors Associated With the Prediction of Manic Symptom Improvement in the Hospitalized Manic Subjects With Bipolar Disorder

Poster Presenter: Doohyun Pak
Lead Author: SangWoo Han
Co-Authors: Jung Han Yong, Sehoon Shim, EunJee Kim, Yungseo Ryu

SUMMARY:

Objectives: This study was aimed to investigate clinical factors associated with the prediction of clinical course in hospitalized patients with bipolar disorder, manic episode. Methods: We performed a retrospective observational study based on the medical records review of 53 bipolar disorder manic patients, who had been hospitalized in the psychiatric ward. During the hospitalization, Young Mania Rating Scales (YMRS) have been measured periodically. Demographic information and clinical characteristics including medications and history of prior hospitalization have been collected in each patient. Linear mixed effect model has been used to assess the effect of clinical factors on the changes of YMRS over time. Selection of clinical factors was conducted using backward elimination with the minimization of Akaike Information Criterion. Results: Mean days of hospitalization were 29.74 ± 16.96. Mean YMRS at the admission was 33.64 ± 7.57. Effective factors for the model included YMRS at baseline, combination of mood stabilizer, and the history of prior hospitalization. Predicted YMRS at the discharge was 10.43 (95% confidence interval 7.13 – 13.72). Conclusion: The current findings suggest the model which may predict the duration of hospitalization of the bipolar disorder manic patients. It would be useful to establish the treatment plan for the patients. KEY WORDS: bipolar disorder, manic episode, hospitalization, clinical course

No. 43

Filling the Evidence Gap for Bipolar Disorders Treatment: Comparison of 29 Monotherapies for Psychiatric Hospitalization Risk

Poster Presenter: Anastasiya Nestsiarovich
Co-Authors: Aurelien Mazurie, Nathaniel Hurwitz, Stuart Nelson, M.D., Berit Kerner, M.D., Annette Crisanti, Ph.D., Mauricio Tohen, M.D., D.P.H., M.B.A., Ronald Krall, Douglas Jay Perkins, Ph.D., Christophe Lambert, Ph.D.

SUMMARY:

Background: Psychiatric hospitalization is a high incidence outcome of bipolar disorder, with great clinical and socioeconomic importance. We present the most comprehensive reported retrospective observational study on drug-dependent risk of psychiatric hospitalization in bipolar spectrum disorders. This study was funded by the Patient-Centered Outcomes Research Institute (PCORI) award (CER-1507-3160). Methods: The Truven Health Analytics MarketScan® administrative claims database was used to analyze data on 190,894 inpatient and outpatient adults who had at least two diagnoses of bipolar disorder or schizoaffective disorder during the observation period 2003-2015 and were newly treated with one of 29 drugs of interest: lithium, mood stabilizing anticonvulsants, first- and second-generation antipsychotics, or antidepressants. Competing risks regression was used to compare monotherapies with respect to the risk of psychiatric hospitalization, non-psychiatric hospitalization, and ending monotherapy. A forward stepwise selection procedure was performed to select model covariates including age, sex, inpatient/outpatient status, comorbidities, and concomitant drugs. Results: Compared to lithium, three drugs were associated with a longer time to psychiatric hospitalization: aripiprazole, valproate and bupropion; and 8 drugs were associated with a shorter time to psychiatric hospitalization: haloperidol, clozapine, ziprasidone, duloxetine, fluoxetine, venlafaxine, sertraline, and citalopram. Concomitant drugs associated with increased psychiatric hospitalization risk included loop diuretics, non-mood-stabilizing anticonvulsants, anxiolytics, sedatives, analgesics. Antibacterial and non-steroidal anti-inflammatory drugs were correlated with reduced risk. Conclusion: Our findings support the relative efficacy of lithium and valproate for reducing hospitalization risk in bipolar disorders and the potential downsides of antidepressant use. The fact that the dopaminergic drugs aripiprazole and bupropion stood out relative to other members of their respective classes merits further investigation.

No. 44

Evaluation of the Relationship Between Clinical Features of Bipolar Disorder and Optic Coherence Tomography Findings

Poster Presenter: Özge Sahmelikoglu Onur
Co-Authors: Soner Alici, Ismail Umut Onur, Ercan Çavusoglu

SUMMARY:

Aim: When the literaure investigated, altough there are studies about relationship between neurodegeneration in bipolar disorder (BD) and optic coherence tomography, there are limited studies investigating relations with clinical characteristics which can affect BD prognosis. In this study, we aim to search OCT finding differences between followed patients which BD diagnosed and a healthy group which matched to patients in sociodemographic features such as age, gender etc. and relation between clinical features of patient group and OCT findings. Method: 80 BD Type I as per DSM 5 patients (average age =37, 8±10,3; %46,3 male) which are being treated in Bak?rköy Mazhar Osman Mental Health and Neurological Diseases Education and Research Hospital, Outpatient Treatment Unit and 80 healthy control (average age=36,9±8,9; %51,3 male) are included into the study. SCID-1, Hamilton Depression Scale, Young Mani Evaluation Scale and Hamilton Anxiety Scale applied to the patients. To all participants, sociodemographic data form applied and eye examinations and OCT evaluation performed in Dr. Sadi Konuk Education and Research Hospital. Findings: There was statistically meaningful difference when we compared Ganglion cell layer (GCL) and Retinal nerve fibre layer (RNFL) values which we obtained by OCT results between BD patients and healthy group (p <0,00). There was no meaningful relation when we evaluate patient group in terms of clinical parameters such as disease duration, age of disease

onset, total number of attacks, number of manic periods, number of deppressive periods and in terms of RNFL-GCL values. Conclusion: The results which we obtained from this study, there is a meaningful difference RNFL-GCL values at BD type I patients comparing to healthy group and supporting the presence of neurodenegeration on BD in this situation. Key words:bipolar disorder, optic coherence tomography, neurodegeneration

No. 45

Mania and Over the Counter Caffeine-Containing Weight-Reducing Preparations: A Case Report and Literature Review

Poster Presenter: Patria Gerardo Arroyo, D.O.
Co-Authors: Alhasan Ghazzawi, M.D., Yassir Osama Mahgoub, M.D.

SUMMARY:
Introduction: Weight gain is a common side effect of bipolar medications, with 80% of patients on antipsychotics experiencing significant weight gain, making obesity and metabolic syndrome important clinical considerations. Weight-reducing preparations are marketed as “natural”, they are commonly used (one study suggesting 15.2% of American adults have used them), and most are not FDA regulated. Caffeine and other stimulants are common ingredients in these supplements. Caffeine causes insomnia and sleep disturbances which is associated with inducing mania. Caffeine also induces cytochrome P450 A12, reducing the effect of some psychiatric medications that can result in destabilization, raising concerns about the safety of their use in patients with bipolar disorder. Objectives: Increase awareness on the possible risk of caffeine-based weight-reducing preparations. Also, to reinforce the importance of asking about over the counter preparations and the need to counsel patients on safer options for weight loss. Methods: A literature search was conducted on PubMed and Google Scholar using the key words, “Caffeine”, “Mania”, and “Weight-Loss Supplements”; in addition to data collection of this individual case. Case: 24-year old male with history of bipolar I disorder, who had six previous psychiatric admissions secondary to mania, with the latest admission three months prior to current presentation. He has been stabilized on a combination of 20mg of olanzapine an

No. 46

Serum Soluble Urokinase Plasminogen Activator Receptor (SuPAR) Levels in Manic-Depresive-Euthymic Episodes of Bipolar Disorder

Poster Presenter: Nesrin Karamustafalioglu
Co-Authors: Pelin Ünalan Özperçin, Burcu Kok Kendirlioglu, Sule Sözen, Ozge Yuksel, Refik Cihnioglu, Tevfik Kalelioglu

SUMMARY:
Objective: In recent years, the role of inflammatory processes in the etiology of bipolar disorder (BD) has been increasing (1,2,3), and our knowledge about the causal relationship between these two conditions is not yet sufficient. Serum soluble urokinase-type plasminogen activator receptor (suPAR) levels, one of the molecules that reflect inflammation and tissue regeneration processes (4,5), may also be altered in bipolar disorder. In this study, it was aimed to compare the levels of suPAR in the manic-depressive-euthymic period with bipolar disorder with healthy individuals and to investigate the relationship of suPAR levels with inflammation markers (C-Reactive Protein, Sedimentation, Leukocyte etc.). **Methods:** Forty-four patients with bipolar disorder-1 manic episode, 35 patients with depressive episode and 42 patients with euthymic episode diagnosed according to *DSM-5* diagnostic criteria were included in this study. These patients were randomly selected among inpatient or outpatient clinics and met the inclusion and exclusion criteria between August 2015 and August 2016. Forty-one age matched volunteers who met the smoking criteria were included in the study as healthy control subjects. Patients were assessed with the Young Mania Rating Scale (YMRS) and the Hamilton Depression Rating Scale (HDRS). For the euthymic period, it was determined that for at least 8 weeks, YMRS≤8, HDRS<7. Serum suPAR levels of patients and healthy control group were also measured. **Results:** The main finding of our study is that suPAR levels were lower in patients with manic and depressive episodes than in patients with euthymic episodes and healthy controls. There was no difference in serum suPAR concentrations between manic and depressive patients and

between healthy controls and euthymic patients. Another finding of our study is that there is a statistically significant difference between the groups in terms of levels of C-reactive protein (CRP), which is an inflammatory marker. **Conclusion:** Urokinase-type plasminogen activator (uPA) and urokinase-type plasminogen activator receptor (uPAR) system; plays a crucial role in inflammation, tissue regeneration, and the axonal regeneration process in the Central Nervous System (CNS) (4,5,6). Considering the studies that point out that there may be decrease in axonal density or axonal dysfunction in CNS at BD (7), the lower detection of suPAR levels during BD episodes in our study could be interpreted as the reduction of suPAR, a molecule that regulates axonal regeneration in the CNS in the BD.

No. 47

Reduced Hippocampal Volume and Association With Posttraumatic Symptoms Severity in Professional Rescue Workers

Poster Presenter: Minyoung Sim

SUMMARY:

Background: Professional rescue workers commonly expose routinely to traumatic events during the course of duties. Many studies have reported that 30-40% of professioanl rescue workers suffered from posttraumatic stress disorders, depression, insomnia, and other psychopathology. For the influence of their duty-related traumatic experience on the brain, we conducted optimized voxel based morphometry (VBM). Mehods: Brain magnietic resonance imaging and neuropsychological function test as well as clinical evalution were perfomed for 15 male professional rescue workers (39.6±10.5 years) and 25 healthy male comparisons without traumatic experience (36.3±9.1 years). Results: Professional rescue workers had lower gray matter volume in right hippocampus, right middle temporal gyrs, and left calcarine gyurus. Volume of right postcentral gyrus were higher in professional rescue workers compared to healthy comparisons. When professioanl rescue workers were divided into two group according to post-traumatic stress symptoms (PTSS), right hippocampal deficit were observed in PTSS group (n=9, 41.2±12.6 yeras) but not in non-PTSS group (n=6, 39.3±6.4 years). Non-PTSS group showed larger volume in right inferior frontal gyrus, left superior parietal gyrus, and left pallidum than healthy comparison group. Conclusion: These results suggest that hippocampoal deficit might be related with PTSS not with traumatic experiecne itself. Rather, traumatic experience seemed to induce recovery by increasing volume of various regions. Further analyses to evaluate the effect of PTSS and traumatic experience on brain change were needed.

No. 48

WITHDRAWN

No. 49

Capturing Clinical Judgments of Psychiatric Symptoms in Children: A Brief Rating Scale for Research and Clinical Applications

Poster Presenter: David Pogge

Co-Authors: John Stokes, Derek Nagy, Philip Harvey

SUMMARY:

Background: Evidence-based practices require systematic assessments of clinical symptoms. Many psychiatric rating scales have been developed for research purposes, but these often require extensive training and are commonly targeted at adult psychiatric disorders. The Children's Psychiatric Symptom Rating Scale (CPSRS) is designed for clinicians to use when rating the most common psychiatric symptoms experienced by children. It is designed for use without extensive training and is closely aligned with the conditions in the DSM. User-friendly features include bidirectional ratings for mood state, activity level, and sleep, as well as specific childhood problems such as enuresis and encopresis. Methods: A series of studies was performed in children aged 12 and under. The inter-rater reliability and test-retest reliability of the CPSRS was examined in a study of 50 children and the results were compared those obtained from ratings with the BPRS. The convergent validity of therapist ratings was examined in a study of 200 children whose parents completed a clinical rating scale. Discriminant validity was examined by looking at the overlap between intelligence test scores and therapist CPSRS ratings in 388 children. Sensitivity to global impairment was examined by comparing severity ratings for 120 outpatients in a partial hospital program to 212 consecutive admissions to

an inpatient unit serving children of the same age. Finally, the factor structure of the scale was examined in a sample of 1788 children. Results: Inter-rater reliability of the CPSRS was similar to the BPRS-CA and consistent with previous studies of child populations (mean item ICC>.60). Convergent validity was confirmed by statistically significant correlations between parent and therapist ratings of mood, conduct, anxiety, and psychotic symptoms (all p<.05). No correlations between IQ total and subscale scores and CPSRS scores were statistically significant (r<.05, p>.38). A multivariate analysis found that inpatients had globally higher scores than outpatients, F(1,26)=9.47, p<.001. The CPSRS factor structure is consistent with its conceptual organization, with factors defining mood, anxiety, conduct, psychosis, and elimination disorders. The model fit was quite suitable in split sample analyses, RMSEA=.06, CFI=.96. Implications: The CPSRS is designed to be easily used by clinicians in practice without specialized training. This user-friendly tool makes it possible to capture judgments of the quality and severity of symptoms experienced by children in mental health settings. Using this instrument, experienced clinicians with no special training in the use of this measure were able to generate ratings that were reliable, valid, and sensitive to global severity of illness. The large samples in these studies suggest that the findings are likely to generalize to other clinical settings and other types of clinician raters.

No. 50

Association of Serum Lipid Profile and Depressive Symptoms in Korean Adolescents: A Preliminary Study Using Data of the Sixth KNHANES

Poster Presenter: Eunji Kim
Co-Authors: Jun-Won Hwang, Jeana Hong

SUMMARY:

BACKGROUND: Previous studies suggested that the serum lipid profile was associated with depression and suicidality.(1),(2) But the relationship between the serum lipid level and depression remains controversial and the epidemiologic evidence on the association of theses factors in adolescent group is sparse.(3) We examined the association between serum lipid level and depressive symptoms in 1127 adolescents in the 6th Korea National Health and Nutrition Examination Survey (KNHANES). METHODS: We use the data from the 6th Korea National Health and Nutrition Examination Surveys (KNHANES VI) conducted by the Korea centers for Disease Control and Prevention, from 2013 to 2015. The KNHANES is a cross-sectional, nationwide survey for the assessment of physical and mental health status, nutritional status and sociodemographic data. Self report questionnaires were used to assess the presence of depression and suicidal ideation, and data were collected from 1127 adolescents aged 12 to 18 years. Serum concentration of total cholesterol, high-density lipoprotein cholesterol (HDL-C), low-density lipoprotein cholesterol (LDL-C), triglyceride were determined by fasting samples and divided into normal and abnormal category. The associations between serum lipid level and depressive symptoms, suicidal ideation were explored using complex samples logistic regression analysis adjusting for variables including sociodemographic and health-related variables, and habitual dietary factors. RESULTS: We analyzed data

No. 51

Association of Cyberbullying With Other Forms of Child Maltreatment, Depression, and Anxiety in Adolescents: Inpatient Versus Outpatient Populations

Poster Presenter: Samantha B. Saltz, M.D.
Co-Authors: Nils C. Westfall, M.D., David Pogge, Philip Harvey

SUMMARY:

Cyberbullying is a major public health problem associated with increased risk of greater psychiatric morbidity and mortality among youths1. Its risk factors, prevalence, varieties, associations with other forms of maltreatment, and deleterious effects in different populations are poorly understood. In two IRB-approved studies2,3, we investigated the associations of recent cyberbullying victimhood with other types of child maltreatment, depression, and anxiety among 101 adolescent psychiatric inpatients (n = 51) and outpatients (n = 50) using a questionnaire about recent social media usage and cyberbullying, the Childhood Trauma Questionairre (CTQ), the Trauma Symptom Checklist for Children (TSCC), the Childhood Depression Inventory 2 (CDI-2), and the Screen for Child Anxiety Related

Disorders (SCARED). Here we summarize, compare, and contrast the findings from overlapping aspects of the studies to identify similarities and differences with important clinical implications. The inpatient population had a slightly lower proportion of subjects with ready access to social media (94.12% vs. 100.0%), a higher prevalence of cyberbullying victimhood overall (21.57% vs. 10.0%) and among females (28.6% vs. 20%), and had a more disproportionate ratio of female to male cyberbullying victims (4.6:1 vs. 3.4:1). Victims had significantly ($p = 0.04$) higher mean CTQ emotional abuse subscale scores in the inpatient setting, but outpatient victims and nonvictims did not significantly differ on any CTQ subscale score. There was a trend toward cyberbullying victims scoring lower on the CTQ minimization subscale in both settings. Cyberbullying victims had levels of depressive symptoms that were significantly greater than those of nonvictims by 1.5 SD in both the inpatient ($p = 0.02$) and outpatient ($p = 0.03$) populations. Among inpatients, there were strong trends toward anxiety symptoms being greater among cyberbullying victims. In the outpatient setting, female victims had 2-fold higher ($p = 0.02$) panic/somatic symptom and 2.3-fold higher ($p = 0.03$) school avoidance mean scores and nonsignificantly greater mean scores on the other 3 SCARED subscales than female nonvictims while the single male victim had anxiety scores on every SCARED subscale that were higher than the corresponding nonvictim mean subscores. In summary, inpatient and outpatient adolescent psychiatric patients have ready access to and use social media at high levels. Cyberbullying victimhood rates are high among females and females are much more likely to be victims than males in both settings, though to a greater extent in the inpatient one. Being a victim of cyberbullying is associated with greater depressive and anxiety symptom levels among inpatients and outpatients. Cyberbullying victimhood may be more strongly associated with emotional abuse among psychiatric inpatients compared to outpatients.

No. 52

Thirteen Reasons Why Your Patient May Be Emotionally Destabilized: The Stories of Vulnerable Adolescents

Poster Presenter: Samantha B. Saltz, M.D.
Co-Authors: Raul Johan Poulsen, M.D., Mousa Botros, M.D., Ariel Smith, B.S.N., R.N., Judith Regan, Charles Barnet Nemeroff, M.D., Ph.D.

SUMMARY:
"13 Reasons Why" has received media attention due to a possible link between adolescents who need psychiatric treatment and suicidal ideation precipitated by the Series. Past studies suggest that suicide dramatizations through media are linked to increased suicide attempts (Sudak, 2005), particularly in at risk adolescents (Mars, 2015). This is concerning as suicide is the second leading cause of death among ten to twenty-four year-olds (CDC 2015). Further investigation is needed to ascertain the effect of media suicides on a possible increase in adolescent emotional destabilization. Methods: We present a case series of three children hospitalized in an acute psychiatric unit after exposure to "13 Reasons Why". We provide information as to the possible link between this Series and the adolescents' destabilization. Results: Case 1: A twelve-year-old male attempted overdosing on ibuprofen. He had recently watched "13 Reasons Why" and was exposed to the "Blue Whale Challenge", both of which influenced his actions. He was admitted to the psychiatric inpatient unit and found to have significant levels of anxiety (SCARED = 64) and depression (CDI2 SR(S)=15) following admission. Case 2: A thirteen-year-old female was admitted to the psychiatric inpatient unit four days after finishing "13 Reasons Why." She presented with self-inflicted lacerations and sent text messages stating she wanted to kill herself. She was subsequently found searching her house for cassette tapes similar to those seen in the show. Case 3: A fourteen-year-old female was admitted to the psychiatric inpatient unit after her school discovered a journal noting her suicidal ideation and lists of people she believed betrayed her. The dates and times of the incidents were recorded. She had elevated levels of anxiety (SCARED=63) and depression (CDI SR=24). Conclusions: In this case series we present adolescents emotionally affected by "13 Reasons Why". All adolescents reported a history of psychiatric treatment, two had a history of sexual abuse, and two appeared to have copied acts from the Series. While mental health professionals

express concerns over the Series, we intend to further explore the potential risks of exposure to series similar to “13 Reasons Why” - specifically the potential for emotional destabilization in adolescents at risk.

No. 53

A Quality Improvement Project to Overcome Insomnia in Adolescents: A 1-Hour Sleep Training for Adolescent Inpatients on an Acute Psychiatric Unit

Poster Presenter: Yasin Bez, M.D.
Co-Authors: Dareen Hafez, M.D., Samantha B. Saltz, M.D., Judith Regan

SUMMARY:
Background: Sleep problems, especially insomnia and associated daytime sleepiness, are common among adolescents (1). There is little literature assessing adolescents’ knowledge about the importance of sleep, particularly among adolescents on an inpatient psychiatric unit. In this quality improvement project we provided inpatient youth with a 1-hour training about sleep and insomnia that included well established strategies for overcoming insomnia and improving sleep quality. We also collected information regarding the helpfulness and usefulness of this quality improvement project for our patients. Methods: Patients who were admitted to Jackson Behavioral Health Hospital’s Child and Adolescent Inpatient Unit between November 1, 2017 and December 06, 2017 were included in the study. To quantify severity of insomnia and daytime sleepiness, the Insomnia Sleep Index (ISI) and Cleveland Adolescent Sleepiness Questionnaire (CASQ) were used. Patients attended a 1-hour training about normal sleep process, sleep hygiene, sleep restriction, relaxation training, and cognitive approaches for insomnia. At the end of the training participants gave feedback whether they found the training helpful. Results: A total of 91 adolescents (49 girls, 42 boys) with a mean age of 14.8±1.7 years and grades ranging from 4th to 12th grade attended the 1-hour training during their hospitalization. Among them, 24.2% (n=22) reported smoking cigarettes and 14.3% (n=13) drinking alcohol. Fifty (54.9%) of the participants endorsed at least 1 nightmare in the last year with many admitting to frequent nightmares (25.3% monthly and 15.4% weekly nightmares). Mean amount of sleep per day needed by the participants was 9.1±3.7 hours. Mean ISI score and CASQ score of the participants were 9.1±6.9 (min-max: 0-28) and 42.8±15.4 (min-max: 16-80). Seventy-three of participants (80.2%) found the training helpful where 68 participants (74.7%) reported that they would consider using the presented information to improve their sleep quality. Girls scored higher both in ISI (girls 11.0±6.9 vs boys 6.9±6.3, p=0.004) and CASQ (girls 46.4±16.8 vs boys 38.6±12.4, p=0.016) whereas both genders reported similar amounts of sleep needed per day. Frequencies of finding the training helpful and patients who would consider using the presented information after discharge were statistically similar between genders (boys 85.7% vs girls 75.5% and boys 81.0% vs girls 69.4%, respectively). Logistic regression model suggested that students who did worse academically were more likely to find the training helpful and were more willing to use the information learned post discharge. Conclusions: Insomnia and daytime sleepiness are common among adolescents admitted to inpatient acute psychiatric unit. Insomnia and daytime sleepiness seem to be more severe among girls. The majority of inpatient adolescents found a 1-hour training about overcoming insomnia both helpful and useful.

No. 54

Efficacy of a Single-Dose Yoga Session in Adolescent Patients in an Intensive Outpatient Program

Poster Presenter: Esther Krohner, M.S.
Co-Authors: Julia Langer, M.H.S., Kate Mohan

SUMMARY:
Background: Mindfulness-based practices including yoga have been gaining considerable attention as a viable treatment option for mental health. Research suggests that physical activity can significantly mitigate primary and secondary symptoms of depression and other mental health symptoms (Richardson et al., 2005). Both unstructured physical activity and yoga are exercise, yet they are very different formats of physical activity. While evidence exists of the overarching benefits of yoga and unstructured exercise on primary and secondary symptoms, little research has been done on the immediate benefits of yoga and the specific symptoms it mitigates. Therefore there is little clarity

on how these activities compare as therapeutic interventions. Researchers are interested in building a specific understanding of what benefits could result from adopting yoga as a coping mechanism as well as the immediacy of the effects.. (Richardson et al., 2005) Researchers compared the immediate effects of yoga to an evidence based, unstructured movement program in an Intensive Outpatient Program (IOP). Methods: a self-report Likert scale questionnaire was administered pre and post session regarding mood, anxiety, stress, body tension, and focus. Participants were part of a manualized IOP in May 2017 and provided consent for data collection while in the program. Our study included teens between 12-17 years old with a total of 10 participants over two weeks. Two, 1.5 hour yoga and unstructured physical activity sessions were facilitated. The yoga occurred indoors, was led by a registered yoga instructor, and included evidenced based mindfulness practices including; breathwork, sensation tracking, guided imagery, resourcing and movement. The physical activity groups were held outside and consisted of a check-in for each individual, stretching, 40 minutes of walking and 20-30 minutes of a game. Participants played kickball on one meeting and tag on the other. Researchers calculated mean, SD, and t-values using paired, dependent t-tests comparing pre and post session ratings. Results: The yoga group showed significant changes in all categories studied from pre to postsession; mood ($t=2.61$, $p<0.05$), stress ($t=-3.15$, $p<0.05$), anxiety ($t=-3.48$, $p<0.01$), body tension ($t=5.69$ $p<0.001$), and focus ($t=-2.25$, p?0.05). A single dose of physical activity, showed nearly significant improvement in mood ($t=2.00$, $p=0.08$) and body tension ($t=2.16$, $p=0.06$). Baseline scores for yoga and physical activity were comparable. The degree of change between yoga group and physical activity group was insignificant, except regarding body tension ($t=2.44$, $p<0.05$). Conclusions: This study highlights the potential of yoga as an effective, single dose intervention for adolescents in an IOP and the need for continued research. A limitation to this study was a small sample size and should be taken into account for future research.

No. 55

Length of Stay May Not Correlate With IQ: Prediction Challenges of IQ Assessment in the Child and Adolescent Psychiatric Inpatient Setting

Poster Presenter: Maria Reynoso, M.D.

SUMMARY:

Objectives: Intellectual disability has been defined as "the impairment of general mental abilities that impact adaptive functioning." It is prevalent in approximately 1 percent of the US population. The aim of our study was to investigate whether IQ is associated with clinical outcomes relevant for inpatient psychiatric hospitals, including duration of psychiatric admission, medication selection, crises management on the unit, and comorbidity with other medical and substance use disorders. Methods: This is an IRB approved study. We conducted a retrospective chart review of child and adolescent patients in an inner city psychiatric hospital in New York City from December 3, 2012, to April 3, 2017. In order to better identify modifiable treatment targets, variables reviewed include: 1) length of stay; 2) number of admissions; 3) episodes of seclusion and restraint; 4) medications prescribed; and 5) substance use. Our sample consisted of 160 patients, with a mean age of 13.6 year (SD = 2.8). The average IQ was 79.2 (SD = 16.4). Results: Full-scale intelligence quotient (FSIQ) was inversely correlated with a history of sexual abuse at a statistically significant level. There was also a trend for IQ being inversely correlated with receiving emergent intramuscular medication. Patients with higher IQ were more likely to be prescribed antidepressants and less likely to be prescribed mood stabilizers, but not significantly correlated with prescription of alpha agonists, stimulants, antipsychotics, or other medication classes. Interestingly, IQ was not significantly associated with length of stay, number of intramuscular medication administrations, number of seclusions or restraints, or use of different classes of illicit substances. Conclusions: The mean IQ of our population was 79. The prevalence of trauma in our sample, as measured by history of physical abuse (28%), sexual abuse (18%), and neglect (18%) was high, which likely impacted normal development of verbal reasoning, attention, and processing speed. IQ may not correlate with length of stay or indirect measures of aggression in the inpatient child and adolescent setting. Moreover, our findings echo the vulnerability of the intellectually disabled population

as our findings demonstrate inverse correlation between IQ and history of sexual abuse.

No. 56

Correlation of Age to Psychotropic Medication Adherence and Substance Abuse in Adolescents With Mental Health Illnesses

Poster Presenter: Aksha Memon
Co-Authors: Satyajit Mohite, M.D., M.P.H., Jane Hamilton, Iram F. Kazimi, M.D., Shiva Sharma, M.D.

SUMMARY:
Background: Positive mental health outcomes in adolescents are associated with adherence to prescribed psychotropic medication regimen and avoidance of substance abuse. The existing literature has no consensus on the association of age and psychotropic medication adherence in adolescents. Substance abuse is more common in older adolescents than in younger adolescents. This study aimed to assess the correlation of age with risk factors for adolescent with mental health illnesses. Methods: Data was obtained from assenting admitted inpatients aged 11-17 years (mean age 15.19±1.56 years) administered within 48 hours of admission using Qualtrics survey composed from questions from the Morisky Medication Adherence Scales, Screen for Child Anxiety Related Disorders, Strengths and Difficulties Questionnaire, Childhood Trauma Questionnaire, Child and Adolescent Mindfulness Measure, Pediatric Quality of Life Inventory, and DSM-5 cross cutting symptom measures. Analysis of 99 observations was performed using linear and logistic regression model in STATA. The sample was predominantly female (n=62, 62.63%) and Hispanic-Latino race (n=45, 45.45%). Results: Age was positively correlated with adherence (β=0.01; p=0.001), risk for substance abuse (OR=1.65; CI=1.22-2.24; p=0.001) and was negatively correlated with current medication use (n=51, β=-0.58, p<0.001). Conclusion: Medication adherence and risk of substance abuse increases with age. This study's findings reconcile with the literature regarding age and substance abuse and provide another example for the currently unclear association between age and psychotropic medication adherence in adolescents.

No. 57

Understanding Commercially Sexually Exploited Youths' Attitudes and Beliefs Toward Mental Health Treatment and Substance Use

Poster Presenter: Mikaela Kelly
Co-Authors: Elizabeth Barnert, Kayleen Ports, Sarah Godoy, Eraka P. Bath, M.D.

SUMMARY:
Introduction: Given the high behavioral health risks of commercially sexually exploited youth (CSEY), we sought to understand their attitudes and beliefs towards mental health and substance use treatment.(1-4) Methods: We conducted semi-structured interviews with 21 female CSEY. Participants were recruited through group homes and a juvenile specialty court serving CSEY. Interviews were audio-recorded, transcribed, and coded for emergent themes using in-depth thematic content analysis. Results: CSEY generally had a history of frequent child welfare and juvenile justice system-involvement, which translated into prior contact with multiple mental health care providers and the receipt of care that was often fragmented. CSEY reported experiencing challenges with behavioral health care, including: difficulty obtaining prescriptions, long wait times for psychiatry appointments, unclear mental health diagnoses, and unclear prescriptions. Youth appreciated providers who were accessible, often via text message; were flexible in meeting location (eg. coffee shop or youth's home); and adapted to youth's schedule and desired frequency of meeting. Youth conveyed that distrust of mental healthcare providers often resulted in disengagement in care. Being told by family, "you've got to learn how to deal with your own problems," decreased youths' willingness to access care and potentiated intergenerational stigma of mental health care. Additionally, CSEY reported using illicit substances as a coping mechanism for a variety of challenges, including anxiety, depression, and memories of past abuse. Several youth also reported that a desire for drugs was often a potent driver for returning to "the life" and remaining connected to commercial sexual exploitation. However, youth were generally reluctant to engage in substance abuse treatment due to lack of identified need or feeling that they could abstain from illicit substance use on their own. Conclusions: While CSEY have insight into their

mental health needs, their fragmented and often negative experiences with behavioral health providers and health systems create reluctance to accessing care. Findings suggest the value of efforts to circumvent the stigma of accessing behavioral healthcare, such as collocating behavioral health and physical health services. Partnering with CSEY in order to solicit their recommendations, both on a systems-of-care and provider- level, could improve successful uptake of mental health and substance use treatment for CSEY.

No. 58

ADHD Comorbidity in Children With Intellectual Disability in Pakistani Culture

Poster Presenter: Nelli El-Ghazal
Co-Authors: Ahsan Nazeer, Muhammad W. Azeem, M.D., Imtiaz Ahmad, M.D.

SUMMARY:
Background: The prevalence of Intellectual Disability (ID) is estimated to be 2% worldwide (Jolly, Homan, Jacob, Barry & Gecz, 2013), and Pakistan has one of the highest reported rates of ID in the world (Mirza, Tareen, Davidson & Rahman, 2009). Prior research indicates that children and adolescents with ID are more likely to present with psychiatric disorders than their non-ID peers; specifically, Attention Deficit Hyperactivity Disorder (ADHD) has been reported to be comorbid with ID (Dykens, 2000). Research in Pakistan that assesses the comorbidity of ADHD in children with ID is limited (Tareen, Mirza, Mujtaba, Chaudhry & Jenkins, 2008; Ali & Hakro 2014); however, this information is necessary to guide the development of behavior management programs and training workshops for parents. Therefore, the goal of this study is to assess the comorbidity of ADHD in children who have an intellectual disability in Pakistan. Method: This prospective study was conducted at a center for children with special needs in Faisalabad, Pakistan over the course of six months from January 2017 to July 2017. Fifty-two participants were recruited using consecutive sampling. An informed consent form was developed by the researchers and the research protocol was presented to the ethical review committee of the Punjab Medical College. Detailed demographic history was recorded from participants, biographical data forms were completed, and symptoms were assessed and diagnosed using the DSM 5 criteria for ADHD and ID. The developmental profile and adaptive functioning of participants was determined through use of the Portage Guide to Early Education (PGEE), and the Conners Parent Rating Scale (CPRS) was administered to evaluate the severity of the participants' ADHD. Results: 73.1% percent of participants were male and 26.9% were female. The participants' birth order was as follows: 51.9% were first born, 23.1% were the second child, and 15.4% were the third child. Children born 4th, 5th, and 6th in their families amounted to approximately 10% of the current sample. Participant ages ranged from 3 to 12 years old, with the majority of participants being 4 (21.1%), 5 (25%), 6 (15.4%), and 7 (11.5%) years old. Based on results of the CPRS, 88.5% of participants had elevated scores on the Global Index, 92.3% had elevated scores on the Inattentiveness scale, 75% had elevated scores on the Hyperactive/Impulsive scale, and 92.3% had elevated scores on the total ADHD composite. Conclusion: Based on the results of this study, it appears that there is an elevated rate of ADHD comorbidity in children diagnosed with ID. There are limitations to the current study, which include the small sample size and the lack of a comparison group with non-disabled peers. However, future research can build on these results, as can practitioners in their delivery of behavior management and parent training programs.

No. 59

Average Distance Travelled to Child/Adolescent Mental Health Clinics in the California Bay Area

Poster Presenter: Nan Farley, B.A.
Co-Author: Julia Langer, M.H.S.

SUMMARY:
Previous research has examined the relationship between travel time and quality of mental health (MH) treatment. Traveling a long distance to clinical therapy appointments has been associated with a negative experience (Girling et al., 2016) and an increased likelihood of treatment non-adherence (Watson et al., 2017). Research indicates travel time to outpatient MH treatment negatively predicts utilization of services (Stultz et al., 2018) with decreased likelihood to utilize lower levels of care

due to distance (Zulian et al., 2011). However, there is currently no research examining the distance people travel for MH treatment. Travel distance trends of families seeking outpatient child/adolescent MH services are needed to identify where clinics should be made available in order to provide accessible and adequate care. Researchers investigated MH care seeking trends using the distance of patients' zip codes (ZC) from two child/adolescent MH clinics in the San Francisco Bay Area; Oakland (OAK) and San Jose (SJ). Researchers identified ZC via medical records of patients receiving services between 2007-2017, n=2,132 (n=353 in OAK and n=1,779 in SJ). Distance traveled was calculated via the shortest route on Google Maps from the patients' respective clinic to the center of the patients' home ZC.This study excludes patients who had non-California ZC or an inability to pay for services. 198 ZC were identified in this study and 147 ZC were within 30 miles from a clinic. Families traveled a mean distance of 13.63±26.51 for treatment; 14.34±23.50 to OAK and 13.60±27.49 to SJ. When families who traveled over 30 miles to the clinic were excluded (n=32 to OAK, n=142 to SJ) the mean distance traveled was 9.16±6.47 to OAK and 9.11±6.22 to SJ. 3.8% of patients (n=9 to OAK, n=71 to SJ) were from the same ZC as the clinic. 8.2% of patients traveled over 30 miles and came from 51 ZC up to 405 miles away. Of those 51 ZC, 50.6% (n=88 to SJ) came from five ZC. We suggest these results are generalizable in the California San Francisco Bay Area because the average distances traveled was not significantly impacted by location (Cohen's d= 0.03). The average distance traveled to each clinic varied by less than a mile and 0.05 miles for ZC under 30 miles away. We conclude child/adolescent MH clinics should exist about 28 miles apart; 18 miles for maximum accessibility. A notable amount of patients traveled further than 30 miles from neighboring ZC indicating certain areas may suffer from inaccessible and inadequate MH treatment. This data does not account for other factors that may have influenced a family's decision to travel, such as local treatment centers not covered by their insurance. Other limitations of this study include relatively small sample size in OAK and only one geographic region. Future research should investigate why patients traveled far distances for treatment accounting for population density, provider accessibility and county MH budget allocation.

No. 60

Addressing Mental Health Inequities in Rural Guatemala Through a Collaborative Community Based Intervention

Poster Presenter: Bharat Reddy Sampathi
Co-Authors: Christina T. Khan, M.D., Ph.D., Alejandro Paiz

SUMMARY:
Background: Mental illness represents one of the highest contributors to disability-adjusted life years in developing countries. In Guatemala, the burden of mental illness is high and associated with extensive trauma, stigma, and limited resources. To date, there is limited data on mental health for the country's rural and indigenous populations. This paper highlights the work of ALAS Pro Salud Mental (ALAS), the only Non-Governmental Organization (NGO) dedicated exclusively to mental health in Guatemala. Methods: This paper reports on data collected from patients participating in ALAS in 2016. ALAS implements the following four programs to achieve their objectives. Access to Treatment: Increase access to mental health services and medication for rural and impoverished populations. Stigma Reduction: Reduce stigma surrounding mental illness and discrimination against those with mental illness. Training and Education: Offer work, research, and professional training opportunities for learners of all levels, including medical trainees, physicians, and health center staff. Rehabilitation and Empowerment: Provide rehabilitation and empowerment to patients and their families to uphold a sustainable lifestyle. Results: ALAS has made a positive impact through each of its programs. The Access to Treatment program provided 240 patients (mean age 35.4 years, SD = 11.6) with free psychiatric consultations, with the majority residing in the state of Sololá. Diagnoses were broad with the most frequent being panic disorder (12.4%), followed by paranoid schizophrenia (10.8%) and posttraumatic stress disorder (6.7%). The Stigma Reduction program reached 233 adults and 671 children/adolescents through 49 workshops focused on health promotion and psychoeducation. The Training & Education

program increased its outreach, training general practitioners and medical residents (domestic and international) in social psychiatry and the prevention/detection of alcohol dependence. ALAS also increased collaboration with both domestic and international universities and secured an agreement with the Ministry of Health to implement a training curriculum statewide for primary care physicians. The Rehabilitation & Empowerment program offered patients and families more than 10 microloans granted by XMicrofinance and continued support for two monthly peer support groups. Discussion: ALAS Pro Salud Mental has made significant strides in addressing mental illness in rural Guatemala. The organization's multimodal approach targets both patients and family members to address burden of disease and improve quality of life for indigenous Guatemalans. The communities' high level of engagement with ALAS suggests that this community-based approach may be an effective means to tackle mental health in rural and marginalized populations amidst a high burden of trauma, stigma, and limited access to resources.

No. 61

A Grassroots Approach to Mental Health Community Engagement & Education

Poster Presenter: Carlos Fernandez, M.D.
Co-Author: Ninos Adams, M.D.

SUMMARY:

Background Reducing disparities in mental health has become a national priority. Minority groups underutilized and often are apprehensive when accessing mental health services. As a result, a significant number of children with behavioral health issues go without diagnosis and treatment; frequently leading to potentially negative outcomes. The UCLA -Kern Medical, Child and Adolescent Fellowship Program has identified these alarming trends and initiated a grassroots community academic partnership educational campaign focusing on educating and engaging community members. The research study will provide mental health education promoting stigma reduction, clarifications of mental health misconceptions and instilling positive attitudes towards children's mental health issues. Methods Th study will be carried out at several community centers in Kern County, with a population made up of greater than 52% Latino. The study population will be volunteer community members interested in learning about children's mental health. They will be provided two separate educational lectures focusing on Attention Deficit Hyperactivity Disorder and Depression. Literacy scales will be used in a pre and post survey to assess general mental health knowledge, stigmatizing attitudes, locating mental health referral information, treatment modalities, recognition of common mental health conditions in children, and knowledge about children's mental health well-being. At the completion of data gathering, the study will incorporate final data collection and statistical analysis to determine possible correlations. This time frame will be in line with the American Psychiatric Association SAMHSA Minority Fellowship (July 2016-June 2018). Results The study's primary focus is to increase the communities knowledge concerning children's mental health. The use of a community academic partnership will aim to reduce stigmatizing attitudes, allow participants to become informed members of their community and recognize common mental health conditions in the child population. We anticipate that during the course of the study participants will learn how to access mental health services, become familiar with different treatment modalities and develop an increase awareness for children's mental health conditions. Conclusions Reducing mental health barriers and eliminating disparities is crucial in empowering patients and families. By utilizing a community academic partnership model, the objective of the study is to inform community members about children's mental health conditions, reduce stigmatizing attitudes in under resourced communities, and increase community mental health literacy. The UCLA -Kern Medical, Child and Adolescent Fellowship Program, intends to help identify early signs and symptoms of mental health conditions for early prevention, intervention and treatment of children within Kern County.

No. 62

Guidelines for Prioritizing Admission to Acute Residential Services (ARS): A Step-Down Alternative to Traditional Psychiatric Hospitalization

Poster Presenter: Philip Hackett, M.D.
Co-Author: Peter M. Yellowlees, M.D.

SUMMARY:

Background: There are currently no guidelines for prioritizing admission to Acute Residential Services (ARS), a step-down alternative to traditional psychiatric hospitalization. This study will attempt to create a set of criteria for determining which patients are most/least suitable for ARS. Methods: The University of California Davis Medical Center (UCDMC) and Bender Court Crisis Residential (BCCR) (an ARS facility that only accepts UCDMC patients) medical records of patients who were admitted to BCCR between 2/10/14 and 6/30/16 are currently being examined (N=358). Thirty-eight of these patients had multiple admissions to BCCR and are being examined separately. Using the ED admission data from the UCDMC EMR, the quantity of ED visits involving a mental health crisis (i.e., ED visits during which the patient had a mental-health-related chief complaint and/or received a mental health evaluation from a licensed clinical social worker or psychiatrist) for each patient during the year before and after admission to BCCR is being determined. The data will be analyzed to determine the characteristics (e.g., demographics, social history, psychiatric diagnoses at time of admission, substance abuse history) of patients who received the most/least clinical benefit from BCCR. Results: Initial data suggests that those patients who benefited most (i.e., a reduction in ED visits) had a negative history of substance abuse and were not connected to multiple outpatient resources. In addition to recent substance abuse and connection to multiple outpatient resources, family/friends potentially causing the patient's mental health crisis correlated with no change or an increase in ED visits after ARS admission. Conclusion: Patients with minimal connection to outpatient resources, no recent substance abuse, and a mental health crisis unrelated to family/friends were more likely to benefit from an ARS admission and had less subsequent ED visits.

No. 63

Refeeding Syndrome After Treatment of Catatonia in a Patient With Acute Psychosis and Multiple Sclerosis: A Case Report and Literature Review

Poster Presenter: Dhruti Patel

Co-Authors: Aimy Rehim, M.D., M.P.H., Charles Mormando, D.O., Benjamin DeLucia, Adeeb Yacoub

SUMMARY:

Background: Refeeding syndrome (RFS) is a severe electrolyte imbalance and fluid shift associated with metabolic abnormalities in malnourished patients who are refed. RFS remains underdiagnosed with incomplete treatment guidelines and is a potentially lethal syndrome. Decreased oral intake is common in catatonia given the commonly observed symptoms of immobility, stupor, and withdrawal, placing these patients at increased risk for RFS after treatment. We report a patient who presented with acute psychosis and catatonia with poor oral intake and the development of RFS after treatment of catatonia. Methods: We present a case report as well as a review using an extensive PubMed search of the literature over the last 50 years published in the English language. Case Presentation: A 19-year-old male with no formal psychiatric history presented to the university hospital and was admitted for acute kidney injury and failure to thrive. Psychiatry was consulted for concerns of psychosis. In addition to psychosis, the patient was found to have symptoms of catatonia including mutism, staring, stupor, withdrawal and marked decrease in oral intake confirmed by the Bush Francis Catatonia Rating Scale (BFCRS). The patient was transferred to the acute inpatient psychiatry unit and was treated for catatonia with lorazepam with significant reduction in catatonic symptoms. The patient began eating and within 48 hours routine blood work revealed a serum phosphorous of 1.2 mg/dL with concern for RFS. Medicine and nutrition consultation were obtained and a diagnosis of RFS was confirmed. His caloric intake was restricted and electrolytes were replaced accordingly. Within 24 hours his electrolyte abnormalities and vital signs normalized. MRI of the brain with contrast was obtained given this atypical presentation of generalized weakness, psychosis, and catatonia which revealed findings consistent with multiple sclerosis. Lorazepam and olanzapine were continued with significant response and the patient was discharged from the hospital with outpatient management. Conclusion: We report the successful treatment of catatonia in a psychotic patient with subsequent refeeding syndrome. Review of the literature reveals no prior reports of

refeeding syndrome after the treatment of catatonia. It often goes undiagnosed with potentially lethal consequences. Although the incidence of RFS after treatment of catatonia is unclear, we recommend routine screening after treatment of catatonia in those with decreased oral intake. This includes close monitoring of vital signs as well as serum phosphorous, magnesium and potassium. In addition, nutrition consultation should be obtained for proper caloric intake. Even when clinical suspicion of catatonia is low, treatment with lorazepam should be highly considered in this population given the potential benefits of a relatively benign medication.

No. 64

"Shine on Harvest Moon" Musical Hallucination: A Case Report and Review of the Literature

Poster Presenter: Xinyi Zhang, M.D.
Co-Authors: Tapan Parikh, M.D., M.P.H., Brian E. Isaacson, M.D.

SUMMARY:

INTRODUCTION: Musical Ear Syndrome (MES) refers to a condition in which those with hearing loss experience distressing musical auditory hallucinations warranting treatment. Unfortunately, given the unclear etiologies of MES, having a clear treatment guideline is challenging. Donepezil is one of the commonly used medications for MES. The purpose of this case report is to emphasize the effectiveness of donepezil use in MES, which may bring some light into future MES treatment guideline formation. CASE REPORT: In 2017, an 86 y/o female with a history of depression, presented with new onset of musical auditory hallucinations for 4 days. Her hallucination started within 24 hours after her daughter was hospitalized. Patient had been hearing "Shine on Harvest Moon," same lyric over and over in her right ear exclusively. The lyric started from the moment she woke up until she fell asleep. The intensity of the music interfered with her watching TV and sleeping. Patient was alert and oriented in all spheres, with grossly intact memory. There were no other significant abnormalities on psychiatric evaluation, except depressive mood. The patient was continued on citalopram 20 mg per day for depressed mood and alprazolam 0.25mg each night for sleep for years as previously prescribed by her family physician. On further assessment, profound hearing loss for months was found. There were no other abnormalities on neurological examination. Electroencephalogram result was normal. MRI showed a small meningioma on sub frontal area which could not explain the auditory manifestation. No internal auditory canals or auditory nerve track abnormalities were found on MRI. Her presentation was consistent with MES. We initiated donepezil 5 mg daily based on previous sporadic reports and within 3 days, her musical hallucinations decreased in volume. On day 5, her musical hallucination became intermittent and tolerable, with 20 minutes of silence in between episodes. A hearing aid was recommended to the patient at this time. The patient was readmitted for other medical reasons a week after discharge and no musical hallucinations were reported. CONCLUSION: This case gives a classic presentation of MES. We only found seven published articles regarding MES involving donepezil treatment. Of which, four case reports demonstrated a clear timeline between initiation of donepezil and effectiveness in treating MES. Three cases on donepezil were evident for clinical effectiveness within a few days. Donepezil, an acetyl cholinesterase inhibitor, how it acts in MES remains unknown, but animal studies suggest cortical cholinergic input requirement for normal auditory perception. Cholinergic agents, routinely studied in memory research, could also be explored in research for the neural bases of music learning and memory. Clinical effectiveness of donepezil in multiple case reports warrants further research into the role of donepezil in MES treatment.

No. 65

Cat-Astrophic Cases on Consult-Liaison: Animal Hoarding and Its Impact on Management of Psychiatric Patients

Poster Presenter: Timothy Kiong, M.D.
Co-Authors: Christina Wu, Somya Abubucker, Celia Ona

SUMMARY:

Hoarding is the persistent difficulty in parting with possessions that results in cluttered living spaces, poor sanitation, and impaired quality of life. While commonly saved items include newspaper, clothing, and paperwork, there is a subset of people who

hoard animals. Data from animal control agencies show that animal-hoarders are often socially isolated (single, divorced, or widowed) and most commonly choose to hoard cats. Compared to object hoarding, the consequences of animal hoarding are more severe not only because failure to provide adequate nutrition and veterinary care often results in animal death, but also the greater exposure to animals and their excreta increases the likelihood of zoonoses. We present two cases of cat hoarding in patients who were referred to the psychiatric consultation-liaison service. The first case was a 50-year-old Japanese male with methamphetamine use disorder who was brought to the ED by police after being found living with hundreds of cats (some alive and some dead) and presented with psychosis and hypertensive emergency. He was started on antihypertensives and antipsychotics with no medical complications, but became increasingly anxious as he believed only he could adequately care for his cats and repeatedly threatened to leave against medical advice because of this. The second case was a 55-year-old Caucasian male who lived with 12 cats and was brought to the ED after going into ventricular tachycardia. Blood cultures confirmed Pasteurella sepsis, antibiotics were started, and he later developed delirium which was managed by psychiatry. He had not seen a medical professional in years and had no documented psychiatric history, but our assessment suggested underlying psychiatric disorders as he expressed hoarding tendencies and persistent paranoid thoughts about his family plotting to get rid of his cats. Although animal hoarding is not currently defined as a distinct psychiatric condition, these cases illustrate how identifying this behavior can help guide diagnosis and treatment. In both scenarios, these patients lived in isolation with little to no interaction with medical professionals until their presentation; therefore a thorough psychiatric assessment and collateral information are essential for determining untreated psychiatric disorders that may be contributing to animal-hoarding behavior as well.

No. 66
WITHDRAWN

No. 67

Kambo-Induced Psychosis: A Case Report
Poster Presenter: Eduardo Espiridion, M.D.
Co-Author: Aparna Baranwal

SUMMARY:
Kambo is an emerging ritual, which involves the application of a toxin produced by a giant leaf frog, Phyllomedusa bicolor, to a freshly burnt skin area. This is being used to heal the chronic diseases of the mind and body. Due to the widespread use of Kambo, more cases of symptomatic health conditions are being observed. In this case report, we report a patient who presented with a new-onset psychotic symptoms, potentially due to the Kambo ritual. This particular venom is used in a ritual of applying toxins to a freshly inflicted burn on the body. The rituals are meant to purify the human body. However, there have been case reports of toxic hepatitis, SIADH, and even death. (1)(2)(3). The toxin is found to have an immediate and rapid effects of tachycardia, nausea, vomiting, and incontinence. These has led to euphoria and sedation(4). Case report: Patient is a 33 year old Caucasian female, who was brought to the emergency room by the police. The police were repeatedly called by the patient about rapes and shootings in her community. These calls were on different occasions the past week. on the day she was brought to the hospital, patient called the police department under a fake name and complained that her husband was raping another individual. She was not making nonsensical comments, including being ritualistically haunted by her father and sister". Patient was found to be not married and she lives alone. She was adamant that she is married to a celebrity. Patient has no significant prior psychiatric history prior to this incident. Patient acknowledged that she is a certified shaman and practices healing through the utilization of Kambo. Patient claims that she uses the Kambo toxin to alleviate her chronic pain. She was doing the ritual once a month but prior to being admitted to the hospital, patient was using it up to nine times that month. She was paranoid, disorganized, and anxious. She had bizarre delusions and labile mood. She had extensive medical workup that was mostly unremarkable. Scars were noted on the patient's legs from the burns and administration of the toxin. Patient was started on Risperidone and she improved

significantly after a 9 day hospital stay in the psychiatry unit. Discussion: Phyllomedusa bicolor secretes toxins that potentially contain vasoactive peptides such as phyllocaerulein, phyllokinin, phyllomedusin, sauvagine, deltorphins, dermorphins, and adenoregulin. Sauvargine has been shown to have a behavioral depressant effect in mice. Deltorphin is a full agonist selective for delta opioid receptors in the central nervous system. It has shown an analgesic effect in mice through the mu and kappa opioid receptors(5). In addition, dermorphine has been shown to have a high potency and selectivity to the the mu opioid receptors but has weak antinociceptive properties (6). Sauvagine has

No. 68

When to Panic About Heart Disease: A Case Report on Anxiety Disorders and Cardiovascular Disease

Poster Presenter: Manesh M Gopaldas, M.D.

SUMMARY:

Background: Mental illness negatively impacts physical health, and a growing body of literature has shown that underlying psychiatric disorders increase the risk of developing medical conditions. While the symptoms associated with panic disorder and post-traumatic stress disorder (PTSD) often mimic the presentation of cardiovascular disease (CVD), less is known about the effects of long-standing anxiety on heart disease. Methods: We discuss a patient with CVD who developed tachycardia-induced cardiomyopathy. Case: A 72-year-old male veteran with a history of coronary artery disease (CAD) along with symptoms consistent with untreated panic disorder and PTSD, presented to the emergency department with chest pain, shortness of breath, and lightheadedness. Initially, our patient's acute symptoms were attributed to an exacerbation of his underlying CAD, but as his workup progressed, his hospital course became more complex. An echocardiogram revealed a greater than 30% deficit in left ventricular ejection fraction, compared to normal findings of the same study performed two years prior. A telemetry study captured episodes of atrial fibrillation with rapid ventricular response upon exertion. "I'm having a panic attack," he stated during this time, and reported similar episodes like this for several years. He also endorsed intrusive dreams, flashbacks, and hyperarousal -- all in line with PTSD symptomatology. Results: Our patient's combined systolic and diastolic heart failure was likely tachycardia-induced, given the alternating rhythm of atrial fibrillation. His history of untreated panic disorder and PTSD would have only worsened this arrhythmia, resulting in his current diagnosis of tachycardia-induced cardiomyopathy. Discussion: Anxiety disorders affect 18.1% of the adult population every year, making them the most common group of psychiatric illnesses in the United States. Heart disease, by comparison, is the leading cause of death among adults aged 65 and over, and is responsible for one in every four deaths. Given how common these conditions are, veterans often present with both. Anxiety causes increased sympathetic nervous system and hypothalamic-pituitary-adrenal axis activity, endothelial damage, and inflammation mechanisms that also influence the development of CVD. Recognizing the clinical implications of this relationship will not only emphasize the importance of treating anxiety disorders in this patient population, but may also reduce the risk of cardiac complications. Conclusions: Instead of viewing anxiety disorders and CVD as distinct entities, providers should consider the pathophysiological relationship between the two. In addition, further research is needed to assess the direct contributions of anxiety on the incidence of heart failure and to establish effective treatments for this patient population.

No. 69

Long-Term Safety and Tolerability of Brexpiprazole as Adjunctive Therapy in Adults With Major Depressive Disorder

Poster Presenter: Nanco Hefting
Co-Authors: Mary Hobart, Peter Zhang, Aleksandar Skuban, Claudette Brewer

SUMMARY:

Objective: Treatment guidelines recommend continuation of successful treatment for 6–9 months after remission of an acute major depressive episode (MDE); therefore, safety monitoring for longer than the period required to treat an acute MDE is warranted. This study (Orion; NCT01360866) evaluated the long-term safety, tolerability, and therapeutic effect of brexpiprazole (0.5-3mg/day), as

adjunct to antidepressant treatment (ADT) in adult patients with major depressive disorder (MDD). Brexpiprazole is a serotonin-dopamine activity modulator that acts as a partial agonist at the serotonin 5-HT_{1A} and dopamine D_2 receptors, and as an antagonist at the 5-HT_{2A} and noradrenaline $\alpha_{1B/2C}$ receptors, all with subnanomolar potency. Brexpiprazole is approved in the US, Australia and Canada as monotherapy for treatment of schizophrenia and in the US as adjunctive therapy to antidepressants for the treatment of MDD. Methods: Patients rolled over into this 52-week open-label study (amended to 26 weeks after required long-term exposure was achieved) from three randomized, double-blind, placebo-controlled Phase 3 studies. The primary outcome variable was the frequency and severity of treatment-emergent adverse events (TEAEs). Efficacy was assessed as a secondary objective using the Clinical Global Impressions – Severity of illness (CGI-S) and Improvement (CGI-I) scales, Sheehan Disability Scale (SDS), and Inventory of Depressive Symptomatology (Self Report) (IDS-SR). Results: 2944 patients were enrolled (1547 for 52 weeks; 1397 for 26 weeks), and 1895 (64%) completed the study. Mean daily dose of adjunctive brexpiprazole at endpoint was 1.51mg/day. Among patients who took at least one dose of brexpiprazole, the incidence of discontinuation due to TEAEs was 8.6%. TEAEs with an incidence of ≥5.0% were weight increased (17.7%), somnolence (8.0%), headache (7.2%), akathisia (6.7%), insomnia and increased appetite (6.3% each). Most TEAEs were mild or moderate in severity. The mean increase in body weight from baseline to Week 26 was 2.7kg, and 3.2kg to Week 52 (observed cases [OC]), and 26.8% of patients had a weight increase ≥7% at any time during the study. There were no clinically relevant findings related to extrapyramidal symptoms, prolactin, or lipids and glucose. Patients' symptoms and functioning showed continual improvement. At Week 26 (OC), mean change (Standard Deviation [SD]) from baseline in CGI-S was -0.61 (0.99); SDS: -0.70 (2.20); and IDS-SR: -5.23 (9.97). The CGI-I score (SD) at Week 26 (OC) was 2.54 (1.26). At Week 52 (OC), mean change (SD) from baseline in CGI-S was -1.05 (1.05); SDS: -1.20 (2.60); and IDS-SR: -7.80 (10.97). The CGI-I score (SD) at Week 52 (OC) was 2.10 (1.14). Conclusions: Adjunctive treatment with open-label brexpiprazole 0.5–3 mg/day was generally well tolerated for up to 52 weeks in patients with MDD. Further, long-term treatment with brexpiprazole was associated with continued improvement in efficacy measures and functional outcomes.

No. 70

Burden and Pharmacotherapy of Treatment-Resistant Schizophrenia: A Survey Among U.S. Psychiatrists

Poster Presenter: Christoph U. Correll, M.D.
Co-Authors: Thomas Brevig, M.D., Ph.D., Cecilia Brain, M.D., Ph.D.

SUMMARY:

Aim: To characterize a US treatment-resistant schizophrenia (TRS) population with regard to demographics, burden, treatment history, and factors influencing therapeutic choice. Methods: A 45-minute online survey with 204 US psychiatrists, each completing three self-selected patient records: two with TRS and one with schizophrenia ('non-TRS'). Psychiatrist eligibility criteria: qualified for ≥5 years, actively treating TRS, seeing ≥50 patients with schizophrenia per month (≥5 with TRS). Results: TRS (n=408) vs non-TRS (n=204) patients were more likely to be unemployed (74.5% vs 45.1%, p<0.001), less likely to live with a partner or family (40.9% vs 53.4%, p=0.004), and more likely to live in a sheltered home (29.4% vs 10.8%, p<0.001). Patients with TRS were more likely to have been hospitalized than patients with non-TRS (93.4% vs 74.0%). Various physical and psychiatric comorbidities were more common in TRS, including obesity (40.2% vs 23.5%, p<0.001) and depression (38.7% vs 25.0%, p=0.001). Positive, negative, and cognitive symptoms were more prevalent (all p<0.01), and occurred more frequently per patient, in TRS. Persistent schizophrenia symptoms had a greater impact on disturbing/aggressive behavior and self-care in TRS vs non-TRS. Of the positive symptoms, psychiatrists considered delusions and hallucinations to be most important to eliminate to improve a patient's long-term prognosis. In addition to reduced symptomatology, psychiatrists listed improved self-care and ability to function as markers of satisfactory improvement. Considering patients' latest three antipsychotic (AP) treatments, overall, the most common regimens were monotherapy with oral

risperidone (31.0%), olanzapine (28.1%) and aripiprazole (25.2%). In TRS, clozapine monotherapy was the most common current treatment (15.9%), though it was infrequently used in the prior two regimens (4.0%). Patients with TRS were more likely to have been prescribed adjunctive psychotropic medications (mood stabilizer, antidepressant, or anxiolytic; all p<0.01). Psychiatrists typically increased the dose of current AP or added a second AP before switching to a new AP or initiating clozapine. AP switches were most commonly due to lack of efficacy (TRS, 71.4%; non-TRS, 54.3%; p<0.001) and intolerability (TRS, 34.4%; non-TRS, 38.4%; p=0.22) with the prior AP. Of patients whose switch was symptom-driven, persistent hallucinatory behavior was a driver for switching in 63.9% of patients with TRS vs 37.1% in non-TRS (p<0.001). Psychiatrists ranked clozapine as the top AP for treating TRS. Conclusions: TRS has a greater clinical burden than non-TRS. TRS is commonly managed by increasing the AP dose, AP polypharmacy, and AP switching, despite clozapine being the only approved AP for TRS. Persistent hallucinations and delusions are the main drivers for treatment change in TRS. There is a need for new treatments for patients who insufficiently respond to available APs.

No. 71
WITHDRAWN

No. 72
WITHDRAWN

No. 73
Depression and Mortality in People With Type 2 Diabetes Mellitus, 2003 to 2013: A Nationwide Population-Based Cohort Study
Poster Presenter: Ji Yeun Yeum
Co-Authors: Jong-Hyun Jeong, Yoo Hyun Um

SUMMARY:
Background: Previous reports have demonstrated a bidirectional relationship between depression and diabetes mellitus (DM), accentuating a need for more intensive depression screening in DM patients. There is a relative paucity of data on the mortality of depressed DM patients in Korea. Methods: Retrospective data from January 2003 to December 2013 were collected for adult Type 2 diabetes mellitus (T2DM) patients older than 30 years using the National Health Information database maintained by the Korean National Health Insurance Service (NHIS). Demographic characteristics were analyzed with descriptive statistics, and the annual prevalence of depression was estimated. Mortality rates and hazard ratios for each age group (stratified into six age groups) of patients diagnosed with T2DM in 2003 were estimated using a Cox proportional hazard method, with the Kaplan-Meier cumulative survival curve showing the overall survival rates according to the T2DM status until the given year of 2013. Results: The annual prevalence of depression was consistently higher in T2DM group from 2003 to 2013. The unadjusted Cox model mortality hazard ratio for the T2DM group with depression was 1.43 when compared to those without depression, and the Kaplan-Meier cumulative survival curve showed a higher survival probability in the non-depressed group. The mortality hazard ratio increased further in the male group, and the highest mortality hazard ratio was noted in the age group of 30 to 39, with the ratio decreasing proportionally in subsequent, older age groups. Conclusion: Depression was significantly associated with a high mortality risk in T2DM patients; hence, a more systematic surveillance of T2DM patients to identify risk factors for depression might contribute significantly to reducing mortality risk in this group of patients. No potential conflict of interest relevant to this article was reported. This work was performed through cooperation with the National Health Insurance Service (NHIS) using the National Health Information Database made by the NHIS (No. NHIS-2015-4-008).

No. 74
Delphi Survey for a Postpartum Depression Guideline Focusing on Priority Measures
Poster Presenter: Gi-Moon Noh, M.D.
Co-Authors: Jin-Yong Jun, M.D., Mikyung Lee, Geon-Ho Bahn, M.D., Jong-Woo Paik, M.D.

SUMMARY:
Background: In South Korea, 70–80% of mothers experience postpartum depressed mood after childbirth, and the prevalence of postpartum depression is about 10–15%; however, the treatment rate is very low because of social stigma

and under recognition of the disease. This is a very serious situation because in the worst cases, untreated postpartum depression can lead to infanticide followed by suicide. Supported by the Ministry of Health and Welfare, this study aimed to achieve consensus among experts regarding countermeasures and a management plan for postpartum depression. Methods: The panel was composed of 30 specialists related to postpartum depression (psychiatrists, obstetricians, pediatricians, preventive medicine specialists, etc.). We conducted a 2-round Delphi survey using a questionnaire. The contents of the first and second surveys were the same. The questionnaire addressed the following issues: “Identifying the current status,” “Establishing infrastructure for management,” “Supporting system,” “Timing and method of screening,” “Urgent problems to be addressed,” and “Barriers to treatment.” Participants were asked to establish a priority measures for each topic. Results: As for “Identifying the current status,” experts considered “National epidemiological surveys” as the highest priority. “National surveys on mothers with postpartum depression” was considered to be the second priority, and a “Postpartum depression expert survey” was considered the third priority. As for “Establishing infrastructure for management,” experts considered “postpartum depression-specific education programs” as the highest priority. As for “Supporting system,” “Expansion of childcare support” was considered to be the highest priority. For “Timing and method of screening,” “One month after childbirth” and “Questionnaires or expert interviews at the time of institution visit,” were considered to be the highest priority. For “Urgent problems to be addressed,” the highest priority was “Establishment of a screening test system.” For “Barriers to treatment,” “Low perception of disease” and “Stigma” were considered to be the highest priority. Conclusions: In South Korea, postpartum depression is a very common and potentially fatal disease, but a mental health system that can improve low rates of treatment is lacking. This study achieved consensus on the status of postpartum depression and priorities of management measures among Korean experts. Based on this, the direction of short- and medium-term policy was suggested. In the future, it will be necessary to supplement the legal system and expand intervention services to overcome postpartum depression.

No. 75

Treatment-Resistant Depression as a Risk Factor for Substance Use Disorders: A National Register-Based Cohort Study

Poster Presenter: Philip Brenner
Co-Authors: David Hägg, Robert Bodén, Gang Li, Allitia DiBernardo, M.D., Lena Brandt, Johan Reutfors

SUMMARY:

BACKGROUND: The relationship between major depressive disorder (MDD) and substance use disorder (SUD) is complex. Patients with SUD seem to have a lowered response to antidepressant treatment (1), and MDD appears to be a risk factor for SUD (2). Up to 50% of patients with MDD do not achieve remission despite two adequate antidepressant treatment attempts, commonly defined as treatment resistant depression (TRD; (3)). The risk for developing SUD among patients with TRD compared to other depressed patients has not previously been studied. METHODS: This study is based on diagnostic, sociodemographic, and prescription data from combined Swedish national registers in the years 2006-2014. All patients with an MDD diagnosis in specialized psychiatric care who had received at least one antidepressant prescription, and with no previous prescription of antidepressants or the potential augmentation medications lithium, antipsychotics, or anticonvulsants within the previous 180 days were included. Patients with psychotic disorder, bipolar disorder and dementia were excluded. Patients who received at least three treatment episodes of antidepressants, antidepressant augmentation, or brain stimulation therapies, within a single depressive episode were classified as having TRD. TRD patients were compared with the whole MDD cohort regarding risk for SUD, using proportional hazards regression treating TRD status as a time-dependent covariant. Hazard ratios (HR) with 95% confidence intervals (CI) were calculated for being diagnosed with or prescribed treatment for SUD. Patients with and without previous SUD diagnoses were analyzed separately. Analyses were adjusted for age, sex, area of residence, education level, anxiety disorders and personality disorders.

RESULTS: Among 121,669 identified MDD patients with antidepressant treatment at start of follow-up, 15,631 (13%) were classified as having TRD. An equal proportion of patients in both groups had a previous SUD diagnosis at start of follow-up (MDD 11.2% vs TRD 11.9%). Mean follow-up was 4.2 years. Among the patients with no previous SUD, TRD patients had an overall risk increase for SUD compared to MDD patients, HR 1.6 (95% CI 1.5-1.7). When analyzing specific SUD categories, risks for use of alcohol (1.2; 1.1-1.3), opioids (2.1; 1.7-2.6), sedatives (2.8; 2.4-3.3), and multiple drugs (2.3; 2.0-2.6) were elevated. When comparing patients with a previous SUD diagnosis, risks for any SUD (1.3; 1.2-1.4), use of sedatives (2.9; 2.3-3.7) and multiple drugs (1.7; 1.5-2.0) were elevated among TRD patients. CONCLUSION: Patients with TRD, with and without previous SUD, are at greater risk for SUD compared to other MDD patients with antidepressant treatment. Clinicians treating TRD patients may face additional challenges in effectively treating depression in the context of higher rates of SUD.

No. 76

Usefulness of Neuropsychiatric Measures to Discriminate Depression Associated With Cognitive Disorders in the Elderly

Poster Presenter: Carol Dillon, M.D., Ph.D.
Co-Authors: Jaime José Pahissa, M.D., Diego Castro, M.D., Sergio Starkstein, M.D.

SUMMARY:

Background: In clinical practice, the presence of depression among individuals older than 60 years is common, and the frequency increases when the reason for consultation is cognitive complaint. In this context, the differentiation of subtypes of depression, as well as separating depression from cognitive decline is of great clinical relevance.Objective: To examine the efficacy of neuropsychiatric tools to better characterize the different subtypes of depression associated with cognitive decline in the elderly. Materials and Method: We examined 117 patients with depressive symptoms and/or cognitive complaint recruited from a Neuropsychiatric clinic at CEMIC University Hospital, and 40 healthy controls from the community. All participants were assessed with the SCAN (a semi-structured neuropsychiatric interview), Beck Depression Inventory (BDI), Hamilton Anxiety Scale (HAS), Neuropsychiatric Inventory (NPI), and Mini Mental State Exam (MMSE). Participants were also assessed with a comprehensive neuropsychological battery and scales to assess functionality. Depression diagnoses were made using DSM IV criteria, whereas AD was diagnosed based on NINCS-ADRDA criteria. Results: There were 30 patients with major depressive disorder (MDD), 31 with dysthymia, 29 with depression associated with mild cognitive impairment (Dep-MCI), and 25 patients with depression and mild Alzheimer's dementia (DdAD).On BDI, patients with MDD and Dyst had significantly higher scores than the healthy controls, and also had higher scores than the other depressive groups. On MMSE, patients with DdAD had significantly lower scores than healthy controls, and than depressive groups. On serial recall and learning, patients with any depression had significantly more deficits than controls; whereas patients with DdAD had significantly lower scores than individuals with any depression. On both recognition and naming tests, patients with DdAD had significantly lower scores than individuals with any depression and controls ($p<0.001$).Finally, on Activities of daily living patients with DdAD, had significantly lower scores than individuals with any depression, whereas patients with MDD had significantly lower scores than controls. Conclusions: Neuropsychiatric assessments such as the Beck Depression Inventory; MMSE; a selection of cognitive tests including serial learning, deferred serial recall, recognition, and naming; and the Lawton's scale of activities of daily living were useful in separating depressive groups from healthy controls and depressive groups among themselves, specially MDD and Dyst from DdAD.

No. 77

Depression and Its Association With Quality of Life, Disability, and Cardiac Function in Patients With Congestive Heart Failure (CHF) in Pakistan

Poster Presenter: Esha Abrol
Lead Author: Ishrat Husain, M.B.B.S.
Co-Authors: Imran B. Chaudhry, M.D., Shahid Junejo, Raza Ur Rahman, M.B.B.S., Paul Bassett, Ph.D., Nusrat Husain

SUMMARY:

Background: There is strong association between depression and mortality rates among patients with congestive heart failure (CHF). Despite the substantial co-existing burden of heart disease and depression in Pakistan, there is limited data exploring the prevalence of depression in patients suffering from CHF. The present study aims to assess the prevalence of depression in CHF and to compare health-related quality of life of depressed and non-depressed patients with CHF at baseline and at 6 months. Methods and results: A total of 1009 patients diagnosed with CHF were recruited from public hospitals in Karachi, Pakistan. Depression was assessed at baseline using the Beck Depression Inventory (BDI) and health-related quality of life using Euro Qol (EQ-5D), Brief Disability Questionnaire and the SF-12 Health Survey. All measures were repeated at 6 month follow-up (n=823). The participants who were depressed at baseline had poorer health related quality of life, higher rates of disability, and higher mortality rates at month 6 as compared to those who were not depressed at baseline. Conclusion: Depression is highly prevalent in Pakistani patients with CHF and is associated with poorer quality of life, and higher disability and mortality rates. It is important to design and test culturally adapted psychosocial interventions to reduce the burden of depression and improve outcomes for this population. Key words. Depression, congestive heart failure, Pakistan, low-income countries, quality of life. Additional co-authors: Tahir Saghir, Muhammad Husain, Sakina Khan, Khalida Soomro

No. 78

Implementing Intimate Partner Violence (IPV) Screening in a Medical School Setting

Poster Presenter: Sudhakar K. Shenoy, M.D.

SUMMARY:

This poster will report on a multipronged initiative to implement screening and referral practices for intimate partner violence (IPV) in an academic healthcare setting through the use of educational initiatives and victimization surveys. We will present the educational activities at the medical school. We will describe the professional and legal requirements for screening and referral for IPV. We will also present the findings of a medical student victimization survey and findings from a psychiatric patient victimization survey.

No. 79

Catatonia in Psychotic Depression: Diagnostic and Therapeutic Challenges

Poster Presenter: Eileen Glocer
Co-Authors: Thanh Thuy Truong, M.D., Shana Coshal, M.D., M.P.H., Ranjit Chacko, M.D.

SUMMARY:

Catatonia is a neuropsychiatric syndrome that can mimic or accompany a variety of psychiatric and medical conditions. An etiology is often elusive, especially when patients present with a history with multiple confounding features. Work up for rapidly progressive medical causes, such as limbic encephalitis, can be extensive and involve a variety of brain imaging techniques and laboratory tests. As symptoms progress into life threatening stages, the treatment team is often faced with a difficult decision to treat empirically for a suspected cause or for catatonia. Therapeutic options for catatonia include benzodiazepines and ECT, the efficacy of which are largely based on clinical experience and case reports, rather than controlled clinical trials. Some patients show a sustained response to benzodiazepines, while others proceed to ECT, in which a major barrier is consenting to treatment. We report the case of a 60-year-old professional male with a history of malaria and depression, who was medically evacuated from Ghana due to a rapid decline in functioning over three weeks. The patient presented in a catatonic state with altered mental status, incontinence and profound weight loss requiring assistance with all ADLs. He received a comprehensive work up for infectious, metabolic and autoimmune etiologies. Based on confounding results, he received a trial with corticosteroids for anti-NMDA receptor encephalitis, but worsened after a few doses. The patient then proceeded with ECT and exhibited marked improvement in global functioning. This case highlights the diagnostic and therapeutic challenges in catatonia, a potentially fatal syndrome that toes the line between psychiatric and medical etiology, further complicated by limited patient involvement in their care.

No. 80

Diagnosis and Treatment Patterns Among Psychiatrists and Other Health Care Providers (HCPs) of Adults With Attention-Deficit/Hyperactivity Disorder

Poster Presenter: Lenard Adler
Co-Authors: Beverly Romero, Emuella Flood, Helen Doll, Phillip Sarocco, Norman Atkins, Alexandra Khachatryan

SUMMARY:
Objective: To understand diagnosis/treatment patterns of adult ADHD among various health-care providers (HCPs). Methods: An online survey conducted among US HCPs who were diagnosing/treating with pharmacotherapy at least five (neurologists and nurse practitioners [NPs]) or ten (psychiatrists and primary care physicians [PCPs]) adults with ADHD per month. Descriptive statistics were reported; categorical variables as frequencies and percentages; continuous variables as mean with SD or median with interquartile range. Chi-square tests were used to compare categorical variables and analyses of variance to compare continuous variables. Dunnett's test was used to compare responses between psychiatrists and other HCP groups. Significance was taken at the 5% level ($p < .05$, two-tailed) throughout. Results: 702 HCPs completed the survey: 201 psychiatrists, 201 PCPs, 200 neurologists, and 100 NPs. Psychiatrists reported greater confidence diagnosing adult ADHD compared to other practitioners (87.1%, 58.7%, 60.5%, and 51.0%, respectively; $p<0.001$). Psychiatrists also were significantly more likely to screen/evaluate for ADHD in patients with depression/anxiety disorders (25.1%, 4.2%, 3.8%, 11.6%, respectively; $p<0.001$) and were significantly less likely to refer patients for diagnosis (62% never vs 9%, 23% and 11%, respectively, $p<0.001$). More non-psychiatrists agreed/strongly agreed (57.9% vs 38.3%, $p<0.001$) that if improved screening tools existed, they would take a more active role in diagnosing/treating adult ADHD. For first-line therapy, more psychiatrists than non-psychiatrists prescribed an LA stimulant once-daily (71.6% vs 62.2%, $p = .023$) or combination of SA stimulants (40.3% vs 29.7%, $p = .009$); non-psychiatrists were more likely to prescribe an SA stimulant (32.9% vs 17.4%, $p < .001$). HCPs reported that the top 3 important factors to patients in choosing an ADHD treatment regimen were insurance coverage/cost of treatment (79.9%), the medication's duration of effect (72.2%), and the side effects (66.5%). Compared to psychiatrists, non-psychiatrists more commonly agreed/strongly agreed that it's difficult to determine the optimal ADHD treatment regimen for adult patients (28.7% vs 18.9%, $p = .005$). In the past 6 months, HCPs switched their patients' regimen most commonly because of insufficient duration of action (35.4%), lack of efficacy (30.3%), and patient request (22.3%). Conclusion: Non-psychiatrists reported greater challenges in diagnosing/treating adult ADHD, as well as the need to refer to psychiatrists/specialists. Non-psychiatrists also reported different prescribing patterns than those of psychiatrists, and experience greater difficulty determining the optimal ADHD treatment regimen for their adult patients. Further understanding the specific challenges non-psychiatrist HCPs face is essential to help remove barriers to diagnosis and effective treatment of adult ADHD.

No. 81

The Bröset Violence Checklist and Prediction of Aggressive Incident Severity

Poster Presenter: Michael T. Guppenberger, M.D.

SUMMARY:
Prediction of short term risk for aggression may help psychiatrists determine appropriate interventions to mitigate risk on an acute inpatient psychiatric unit. The Bröset Violence Checklist – Visual Analogue Scale (BVC-VAS) is one such tool, though most research has focused on its prediction of aggression versus aggression severity. The current study examined the relationship between the BVC-VAS and aggression severity as measured by the Staff Observation Aggression Scale – Revised (SOAS-R), including for provoked versus unprovoked aggression on a psychiatric intensive care unit. BVC-VAS scores were completed for three shifts per day, with additional scores for significant changes in behavior. Most patients had four BVC-VAS scores available for a 24-hour period prior to an aggressive incident. Over a 17-month period there were 789 completed SOAS-R, with 302 incidents having no

identified provocation and 487 having an identified provocation. Results of an independent sample t test found that aggression associated with unprovoked incidents (m = 13.12, SD = 4.92) was rated as more severe than provoked aggression (m = 11.83, SD = 5.09), t(787) =3.49, p = .001. Results of independent sample t tests found that the BVC-VAS score was higher for each of the 4 times periods for unprovoked versus provoked aggression. To examine the predictive relationship between the BVC-VAS and SOAS-R severity, including potential interactions effects between these variables, multiple regression with a stepwise insertion was used. BVC-VAS time periods 1, 2, 3, and 4, along with time of day of the incident was entered in the model. The model was significant, F(4, 759) = 10.317, p < .0001, for BVC-VAS time periods 3, 1, 4, and time of day (in order of insertion). The model accounted for 5.25% of the variance or a small effect size (r2= .052). Of note, even though BVC-VAS Time 2 was significantly correlated with SOAS-R total score, it did not significantly contribute to the model. Results of this study suggest that while unprovoked aggression was associated with more severe incidents, higher BVC-VAS scores was also more strongly associated with these incidents. Psychiatrists should consider the greater predictive value of multiple elevated scores on the BVC-VAS within a 24-hour period when making decisions about how to manage risk for aggression. Multiple elevated scores, along with time of day, may represent a higher risk for severe aggression versus any single elevated score, justifying appropriate interventions.

No. 82

Randomized Double-Blinded Crossover Trial of Phentermine-Topiramate ER Versus Placebo to Treat Binge Eating Disorder and Bulimia Nervosa

Poster Presenter: Debra L. Safer, M.D.
Co-Authors: Sarah Adler, Shebani Sethi, M.D., Jason Bentley, Thomas Najarian

SUMMARY:

Background: Despite many helpful current treatments for binge eating disorder (BED) and bulimia nervosa (BN), new options are needed for the significant subset with suboptimal outcomes. Phentermine/topiramate ER (PHEN/TPM ER; Qsymia), an FDA-approved obesity treatment, is one such option. Topiramate effectively reduces disordered eating in BED and BN, though side effects lessen acceptability. PHEN/TPM ER has shown superior efficacy for obesity compared to topiramate or phentermine alone. While a prior BED case series demonstrated PHEN/TPM ER reduced binge eating and weight, PHEN/TPM ER has not been tested for BED or BN in double-blinded randomized studies. Methods: Twenty-two participants consented and entered this double-blinded, randomized, placebo-controlled crossover trial. After stratification by BED or BN diagnosis, participants were randomized to 12 weeks of PHEN/TPM ER (3.75mg/23mg-15mg/92mg) or placebo followed by 2-week washout and a 12-week crossover to the other condition. Assessment measures included demographics, side effect recordings, heart rate, blood pressure, weight, EDE, EDE-Q, YBOCS-BE, TFEQ, YFAS, BES, and PHQ-9. The primary outcome was objective binge eating days (OBE days)/4 weeks with secondary outcomes of binge eating episodes (OBE episodes)/4 weeks and percentage abstinence from binge eating. Patients were assessed at baseline, after 12 weeks of treatment, prior to the crossover, and after 12 weeks crossover. Treatment effect was estimated using mixed-effect models with fixed effects for treatment, period/study phase, and eating disorder diagnosis. Results: The sample of 22 adults (BED = 18, BN= 4) included 96% females, 42.9 (SD=10.1) years old, BMI 31.1 kg/m2 (SD=6.2) and 55% Caucasian. At baseline patients had an average of 16.2 (SD=7.8) OBE days over the prior 28 days compared to 4.2 (SD=8.4) after PHEN/TPM ER and 13.2 (SD=9.1) after placebo. PHEN/TPM ER significantly reduced OBE days by 9 (p=0.001). After PHEN/TPM ER OBE episodes were reduced by 11.7 (p=0.004). Abstinence rates were 64% after PHEN/TPM ER compared to 14% after placebo (p=0.011). Mean percentage weight loss from baseline was 6.2% for PHEN/TPM ER, with 50% experiencing weight losses between 3-9%. Four patients (18%) dropped-out, n=2 on placebo, n=2 on PHEN/TPM ER (insomnia= 1, ineffectiveness= 1). No serious adverse events were reported and vital signs did not significantly shift on PHEN/TPM ER. Conclusion: This is the first RCT to evaluate the safety and efficacy of phentermine/topiramate ER for BED and BN. PHEN/TPM ER was significantly more effective at reducing binge eating behaviors

compared to placebo. The overall drop-out rate was low, with only one participant drop due to PHEN/TPM ER side effects. Results can help inform the design of future, larger clinical trials. Study supported by Stanford Clinical and Translational Science Award (CTSA) to Spectrum (UL1 TR001085).No salary support.

No. 83

Sexual Trauma in Patients Admitted to an Eating Disorder Treatment Center

Poster Presenter: Mel McGraw
Co-Authors: Colleen M. McGuire, D.O., Patricia Westmoreland, M.D.

SUMMARY:

At least 30 % of patients with eating disorders have suffered sexual trauma. They develop an unhealthy relationship with food, often in the context of trauma recollection. Controlling their food intake is both an attempt to feel a sense of emotional control and a desire to control their external appearance so as to no longer be attractive to the perpetrator or abuser. Childhood sexual abuse may be particularly linked to the presence of binge eating behavior and other forms of impulsive self-destructive behavior and a higher dropout from treatment. Individuals who develop eating disorders after sexual trauma are also more likely to have experienced posttraumatic stress disorder symptomatology. In a review of 22 random charts of patients with eating disorders who were admitted to Eating Recovery Center in Denver, we found that 18 of 22 patients had a documented history of sexual trauma. Of the 18 patients with documented sexual trauma, eight were diagnosed with anorexia nervosa binge purge subtype, six with anorexia nervosa restricting subtype, three with bulimia nervosa, and one with other specified feeding or eating disorder. In addition, 16 of 22 patients reported symptoms consistent with posttraumatic stress disorder. Of these 16 patients,12 also reported a history of self harm, and six reported a past history of suicide attempts. These preliminary data are consistent with what has been reported in the literature regarding eating disorders and sexual trauma. In this presentation we will review complexities inherent in treating this sub-population of patients. We will outline adjunct medications that may be useful in managing eating disorder patients who have suffered trauma and, also highlight potential side effects unique to this population. In addition, we will discuss psychotherapeutic strategies that may be helpful in dealing with PTSD symptoms, other psychiatric co-morbidities and the impulsive behaviors that are likely to occur in these patients.

No. 84

Criminal Background as Part of Violence Risk Assessment

Poster Presenter: Katrina Shchupak

SUMMARY:

There is much written in the literature on psychiatric risk assessment of violence, some of the highest predictors of which include a prior history of violence and substance use. For those working in a Psychiatric Emergency Service setting, predicting violence is crucial for the safety of both staff and patients. This study aims to further the available knowledge by determining if there is also an association between criminal background and aggression in a Crisis Response Center, specifically if there is a higher likelihood of aggression and use of restraints associated with specific types of criminal histories. This will be done by retroactively looking at patients seen within a 1 month period in the Episcopal Hospital Crisis Response Center and comparing publicly available criminal histories with incidents of aggression and restraint use. Further, we will also evaluate severity of aggression, using injury to staff or other patients as a marker, in order to see if there is a difference between more or less severe aggression in correlation to criminal history. This will ultimately help individualize de-escalation techniques by identifying high-risk patients early in the triage process, with the hope of decreasing the need for use of restraints.

No. 85

NMS-Like Features Are Common in Women With Anti-NMDA Receptor Encephalitis

Poster Presenter: Ronald Joseph Gurrera, M.D.

SUMMARY:

BACKGROUND: Women are at greater risk than men for developing anti-NMDA receptor encephalitis (anti-NMDArE), and if they do they will most often

be treated first by a psychiatrist because most anti-NMDArE patients manifest behavioral and subjective symptoms for which antipsychotic medications are usually prescribed. Unfortunately, anti-NMDArE also manifests clinical signs that can be mistaken for neuroleptic malignant syndrome (NMS), complicating diagnosis and potentially delaying treatment that can avert serious long-term disability. This study examined the frequency of NMS-like clinical features in published reports of anti-NMDArE. METHODS: PubMed and EMBASE databases were systematically searched executed for all published reports of adult cases of anti-NMDArE with behavioral or psychiatric symptoms. Citations identified by the search process were screened manually to eliminate duplicate reports. RESULTS: This procedure yielded 185 women with mean(S.D.) age 29.4(10.3) years. Fever was reported in 54 patients (29.2%), dysautominic features were observed in 91 patients (49.2%), altered mental status was noted in 133 cases (71.9%), and evidence of increased muscle tone, rigidity or catatonic features was present in 93 cases (50.3%). In 46 (24.9%) patients only one NMS-like feature was present, 52 (28.1%) patients had two, 43 (23.2%) patients had three, and 23 patients (12.4%) had all four NMS-like features. Thus, NMS-like features were observed in 164 cases (88.6%). CONCLUSIONS: Women with anti-NMDArE are very likely to manifest clinical features of NMS. However, altered mental status is much more common than fever or dysautonomia, and this profile may help clinicians to distinguish anti-NMDArE from NMS.

No. 86

Differentiating Anti-NMDAr Encephalitis From Psychiatric Disorders

Poster Presenter: Ronald Joseph Gurrera, M.D.

SUMMARY:

BACKGROUND: The diagnosis of anti-NMDA receptor encephalitis (anti-NMDArE) is difficult because it commonly presents with behavioral and subjective symptoms that suggest a primary psychiatric illness, and in fact most anti-NMDArE patients are first evaluated by a psychiatrist. Fortunately, if appropriate treatment is administered promptly serious long-term disability or death can be prevented, but early recognition is crucial. Some authors have observed that all illness episodes appear to progress according to a broad prototypical pattern, but inter-individual variation in the clinical course is considerable. Improved recognition of its most salient clinical features could promote more accurate early diagnosis. METHODS: All published reports of adult anti-NMDArE cases with behavioral or psychiatric features were identified by systematic searches of PubMed and EMBASE databases. Search results were reviewed manually to eliminate duplicate reports. RESULTS: One hundred eighty-five women (mean(S.D.) age 29.4(10.3) years) and 45 men (mean(S.D.) age 36.5(15.9) years) were identified. Clinical signs and symptoms were strikingly diverse. The most commonly observed features were seizures (all types) (61.3%), disorientation and/or confusion (42.6%), dyskinesias of the face and mouth (39.1%), mutism and/or staring (37.0%), dyskinesias of other body parts (36.6%), memory deficits (34.5%), reduced arousal (30.2%), fever (28.1%), and aphasia (26.0%). CONCLUSIONS: In patients with anti-NMDArE who are likely to be referred to a psychiatrist, the most frequent clinical findings are not commonly associated with routine psychiatric disorders. These features may serve as diagnostic clues which, when coupled with heightened clinical vigilance, can reduce the likelihood of a misdiagnosis.

No. 87

Hallucinations in Anti-NMDA Receptor Encephalitis Are Associated With Fever

Poster Presenter: Ronald Joseph Gurrera, M.D.

SUMMARY:

BACKGROUND: The first clinician to evaluate most patients with anti-NMDA receptor encephalitis (anti-NMDArE) is usually a psychiatrist because they appear to have a primary psychiatric disorder. Hallucinations are common, and this may be one factor leading to the frequent misdiagnose of this disorder. There is effective treatment, but it must be initiated promptly to avoid serious long-term disability. More information about these hallucinatory symptoms could improve early diagnostic accuracy, facilitating early intervention. The aim of this study was to more fully characterize sensory abnormalities associated with anti-NMDArE. METHODS: PubMed and EMBASE databases were

systematically searched for reports of adult anti-NMDArE cases with behavioral or psychiatric symptoms. RESULTS: The search identified 230 unique patients (45M, 185F) with mean(S.D.) ages 36.5(15.9) and 29.4(10.3) years, respectively. Evidence of seizures was present in 148 (64.3%) patients, 66 (28.7%) patients had fever, and 100 (43.5%) experienced hallucinations. Sensory modalities were affected in the following proportions: auditory (20.9%), visual (12.6%), olfactory (1.3%), taste (.9%), tactile (.4%), somatic (.4%), and unspecified (13.9%). Hallucinations collectively were not associated with fever (one-tailed Fisher's exact p= .26), but auditory (p= .009) and visual (p= .036) hallucinations were. Hallucinating patients were also older (F[1,228]= 10.72, p= .001). The quality of sensory symptoms in both modalities was often atypical for a primary psychotic disorder. CONCLUSION: Every psychiatrist is likely to encounter patients with anti-NMDArE in his/her practice. This diagnosis should be actively considered when hallucinations are accompanied by fever, especially when the hallucinatory content is atypical.

No. 88

Prevalence of Depression Among Geriatric Patients Attending a Tertiary Hospital in Nepal

Poster Presenter: Luna Paudel, M.D.
Co-Authors: Nidesh Sapkota, Dhana Ratna Shakya, Rajesh Kumar, Suren Limbu

SUMMARY:
Background: The ageing of world population is a global phenomenon. It has been assumed that the prevalence of elderly with mental illness will increase by at least 10% from 2000 to 2030 and depression is one of the commonest psychiatric disorders among them. This study was done to estimate the prevalence of depression among geriatric patients above 60 years at B P Koirala Institute of Health Sciences (BPKIHS), Dharan, Nepal. Methods: This was a cross-sectional study of one year duration that included all consecutive cases of elderly (60 or more years) patients presenting at BPKIHS. Mini Mental State Examination (MMSE) was done as screening tool for cognitive impairment. Those who were diagnosed as Depression according to ICD-10 DCR criteria were further applied Geriatric Depression Scale (GDS) and Hamilton Rating scale for depression. Results: There were altogether 193 patients. Majority of the subjects (65.28%) were of age group (60–70) years, male (53.89%), hindu (81.3%), married (74.61%), illiterate (46.6%), unemployed (40.9%), belonging to joint family (50.8%), living with both spouse and children (43.52%) and low socioeconomic status (64.2%). Majority of the patients (61.1%) scored more than 25 in MMSE. Prevalence of Depression was 33.16% (n=64). Caste (p= 0.021) and MMSE (p= 0.017) was statistically significant with depression. Conclusion: Depression is common among elderly patients. We need to be vigilant regarding diagnosis of depression. A simple instrument such as the Geriatric Depression Scale is useful and easily administered.

No. 89

Emotional Abuse and Elderly Depression Among Community Dwelling Korean Elderly Population

Poster Presenter: Jong-Il Park
Co-Authors: Jongchul Yang, M.D., Ph.D., Min-Cheol Park, M.D., Ph.D.

SUMMARY:
Objectives: Despite recent advances, there is little literature about the risk factors for emotional abuse among Korean elderly population. The present study investigated the relationships between depression and emotional abuse among community-dwelling Korean elderly population. Methods: We analyzed the dataset from the Survey of Living Conditions and Welfare Needs of Korean Older Persons, which conducted by the Korea Institute for Health and Social Affairs (KIHASA) in 2011. Elderly subjects (aged more than 65 yrs old, n=10,674) were randomly selected. Multivariate logistic regression was used to investigate the risk factors for emotional abuse in terms of their sociodemographic and health-related variables including elderly depression evaluated by the short version of the Geriatric Depression Scale. Results: In our study, 9.4% of elderly reported that they experienced emotional abuse in the previous year. In addition, 44.0% of elderly reporting emotional abuse was suffered from depression. After multiple logistical regression, poor social support (OR for no social support, 1.713; CI, 1.381-2.125, p<0.001) and having chronic illnesses (OR for

more than 3, 1.480; CI, 1.143-1.918, p<0.005) were associated with increased risk of emotional abuse, and aged more than 75 yrs (OR, 0.813; CI, 0.672-0.983, p<0.05) was associated with decreased risk of emotional abuse. Multiple logistic regression modeling showed that elderly depression is independently associated with emotional abuse (OR, 1.788; CI, 1.544–2.072, p<0.001). Conclusions: Our result showed that emotional abuse in elderly is prevalent. Our findings suggest that depression, poor social support, and having chronic illnesses are significant risk factors associated with emotional abuse among Korean elderly. Addressing those risk factors with preventive interventions could have significant public health implications. Further studies are warranted to gain a better understanding of emotional abuse in elderly

No. 90

Functional Connectivity of Default Mode Network in Older Adults With Subjective Cognitive Decline

Poster Presenter: Sarah Elmi, M.D.
Co-Author: Linda Mah, M.D.

SUMMARY:

Subjective cognitive decline (SCD) is defined by memory complaints with normal performance on formal neuropsychological testing. SCD is conceptualized as a preclinical stage of Alzheimer's disease (AD) because older adults with SCD are more likely to develop AD than those without memory concerns when followed over time. In addition, SCD is associated with biomarkers of AD, including structural neuroimaging abnormalities. It is unclear whether older adults with SCD show abnormalities in resting state brain activity that are observed in AD. In the current study, we compared older adults with SCD (SCD+) versus those without memory concerns (SCD-ve) using resting state functional magnetic resonance imaging (rs-fMRI). We hypothesized that SCD+ve would be associated with reduced connectivity of the default mode network (DMN) compared to SCD-ve. Method: Participants were 32 older adults with English language proficiency and normal neuropsychological performance using a standard battery. Participants were classified as SCD+ve if they responded affirmatively to the question "Do you feel your memory is worse?" and "Are you concerned about your memory?" Participants with a negative response to either question were classified as SCD-ve. Exclusion criteria were diagnosis of MCI, AD, or other dementia, current or past history of medical, neurologic or psychiatric conditions associated with cognitive impairment or that may affect brain structure or function and MRI contraindications. Participants were scanned at 3T on a Siemens MR scanner. T1 structural images were collected for anatomical co-registration. Functional MRI data were preprocessed using slice timing, motion correction, spatial normalization and smoothing. To assess the integrity of the DMN, we will conduct a seed analysis using Partial Least Squares (PLS) with seeds in the posterior node of the DMN; i.e., the posterior cingulate cortex (PCC) and in anterior node of the DMN; i.e., medial prefrontal cortex (mPFC). Results: We recruited 32 participants, mean age was 72.5 (SD=6.97), 10 of them were male(31.25%). We expect that out data will show decreased effective connectivity of the PCC and of the mPFC in SCD+ve older adults as compared with SCD-ve. Conclusion: Regional abnormality in resting state activity, could serve as a biomarker that can predict progression to MCI (Mild cognitive impairment) and AD.

No. 91

Urinary Incontinence as a Risk Factor for Depression in Males: A Longitudinal Study

Poster Presenter: Nikita Bodoukhin
Co-Authors: Benjamin Hellman, Carlos A. Salgado, M.D.

SUMMARY:

Background: Urinary incontinence (UI) has been demonstrated as a significant risk factor for developing depression in elderly females.(1) In elderly males, urinary incontinence is a prevalent problem that has long been suspected to have significant social consequences and has been given relatively little attention. This retrospective cohort analysis evaluated UI as a possible risk factor for developing depression in elderly males. Methods: A secondary data analysis was performed on the Health and Retirement Study cohort, an ongoing study of adults 51-61 years at recruitment when the first wave was assembled in 1992; all participants were followed up every two years.(2) Information of UI is available from 1996 onwards. Data from

biennial follow up of men until 2012 was used. Men with probable depression at baseline were excluded from analysis. The outcome of interest was probable depression, defined as a score of ?3 on the 8-item Center for Epidemiologic Studies-Depression scale. UI was defined based on questions about experience and frequency of urine loss. We fit Cox-proportional hazards regression models to this data, adjusting for estimates of baseline demographic, psychosocial and health status variables found to confound the association between UI and the outcome of interest. As a test of our methodology, we ran the previously described analysis using a female sample and were able to replicate a previously reported association between UI and developing depression. Results: Our sample included 5,256 continent (mean age 61.2) and 960 incontinent (mean age 65.0) men. Incontinent subjects, besides being older, had higher prevalence of comorbidities including cardiovascular conditions, stroke, diabetes, cancer, arthritis, and psychiatric conditions other than depression. All other measured characteristics, including demographics were evenly distributed between incontinent and continent study participants. Prior to adjustment, we found an association between urinary incontinence and depression among previously non-depressed males over the age of 55 years: hazard ratio (HR) of 1.8 (95% CI 1.5-2.0). However, after adjusting for possible confounders, the Cox regression yielded a HR of 0.7 (95% CI 0.5-1.1) consistent with no significant association. Conclusion: In previously non-depressed retirement-age men, after controlling for potential confounders, we did not find an association between urinary incontinence and incident depression, despite having adequate statistical power and sufficient follow up time for eventual incident depression to develop. This finding differs from previous reports in the literature which suggested an association between urinary incontinence and depression, particularly in women. These unexpected results may guide research on the possible differences in perceived experiences of incontinence between aging men and aging women. This study was funded internally and the authors have no conflicts of interest to declare.

No. 92
Including Electroconvulsive Therapy in the Routine of a Private Health Insurance Company in Brazil and and Its Effects
Poster Presenter: Ricardo Kuhni, M.D.

SUMMARY:
The Prevent Senior is a brazilian health insurance company in Brazil dedicated to people aged from 49 years. Currently, it serves a population of approximately 370.400 beneficiaries. Electroconvulsive therapy (ECT) is a treatment that is not used routinely in Brazil, except for very severe patients and refractory to drug treatment. Besides, most of the utilization of ECT is in public and academic services. This paper describe the results in psychiatric hospitalization rates and patient care after the inclusion of ECT in the daily routine of a psychiatric team in a private health insurance company in São Paulo – Brazil.

No. 93
Psychiatric Epidemiological Profile of Geriatric Patient on a Hospital Network in Sao Paulo
Poster Presenter: Ricardo Kuhni, M.D.

SUMMARY:
The Prevent Senior is a brazilian health insurance company in Brazil dedicated to people aged from 49 years. Currently, it serves a population of approximately 370.400 beneficiaries. This paper describe the profile of patients attended by the psychiatric team, in a period of 26 months, and what are the most prevalent diseases (featuring the pathologies according to the criteria of ICD-10) in the hospital network Sancta Maggiore,in São Paulo – Brazil.

No. 94
Psychiatric Epidemiological Profile of Geriatric Patient in an Outpatient Service in Sao Paulo
Poster Presenter: Ricardo Kuhni, M.D.

SUMMARY:
Prevent Senior is a Brazilian health insurance company dedicated to people aged from 49 years. Currently, it serves a population of approximately 370.400 beneficiaries. This paper is a 36 months follow up and has the objective to describe what are the most prevalent mental disorders (featuring the pathologies according to the criteria of ICD-10) in

patients treated at outpatient service called 'Premium Clinic", designed for patients with multiple comorbidities and greater severity, in São Paulo.

No. 95

Race/Ethnic and Sex Differences in Relations of Behavioral Factors to Biological Aging in a Large Sample of Adults Aged 50+ in the VITAL-DEP Study

Poster Presenter: Olivia I. Okereke, M.D.
Co-Authors: David Mischoulon, M.D., Ph.D., Grace Chang, M.D., M.P.H., Charles F. Reynolds, M.D.

SUMMARY:

Background: Public health guidance supports wellness behaviors such as exercise, avoiding smoking and light/moderate drinking, as well as maintenance of good mood, to promote healthy aging. However, little is known about how associations between these factors and established markers of biological aging (telomeres) may vary by race, ethnicity and/or sex. Method: We included a sub-set of 792 diverse community-dwelling US adults aged 50+ years (mean age=67; range 50-90; 51% male) from the depression prevention ancillary (VITAL-DEP) to the VITamin D and OmegA-3 TriaL, a randomized trial of fish oil and vitamin D supplements for prevention of cancer and cardiovascular disease; VITAL-DEP participants were at-risk for incident or recurrent depression but did not have depression at baseline. Demographic, physical activity (PA), alcohol use, smoking and mood variables (including the Patient Health Questionaire-8) and other covariates were collected at baseline. Relative telomere length (RTL) was measured using a real-time quantitative PCR assay for DNA extracted from leukocytes in blood samples. Results: Chronological age was significantly associated with shorter RTLs; females had significantly longer RTLs than males. Black participants had longer mean RTLs than whites; however, there was a sex interaction and this effect was driven by longer RTLs among black men (p-interaction=0.035); black and non-Latino white women had no differences in RTLs. As expected, higher PA, particularly vigorous activity, was associated with significantly longer RTLs, while greater smoking pack-years were associated with shorter RTLs in the full sample. However, despite positive associations for PA among non-Latino white and black participants, there was no association among Latinos (p-interaction=0.009). Females – particularly black females – had significantly greater age-related telomere shortening related to smoking compared to males (p-interaction=0.025). Alcohol use had borderline inverse associations with RTLs in the full sample; however, light/moderate (weekly, monthly) use was significantly associated with longer RTLs among non-Latino white females, while daily drinking was associated with shorter RTLs among black and Latino, but not white, females. There were no overall associations of PHQ-8 score or past depression with RTLs. Conclusion: Results were consistent with prior findings linking age, black race, female sex, smoking and physical activity to telomere length in the overall sample. Novel significant variations by race, ethnicity and sex were observed in associations of key behavioral factors – physical activity, smoking and alcohol use – with biological aging. Findings may have implications for wellness recommendations regarding modifiable behaviors: influences of these factors on biological aging may not be uniform across sub-sets of the population. Future work may identify optimal levels of these behaviors, by sex and race/ethnicity, to promote healthy aging.

No. 96

Antipsychotics, Antidepressants, Anticonvulsants, Melatonin, and Benzodiazepines for Behavioral and Psychological Symptoms of Dementia: Systematic Review

Poster Presenter: Poorvanshi Alag, M.D.
Co-Authors: Rajesh R. Tampi, M.D., M.S., Silpa Balachandran, M.D.

SUMMARY:

Objective: The purpose of this systematic review is to evaluate the data on the use of antipsychotics, antidepressants, anticonvulsants, melatonin, and benzodiazepines for the treatment of behavioral and psychological symptoms of dementia (BPSD) from meta-analyses. Method: We performed a literature search of PubMed, MEDLINE, EMBASE, PsycINFO, and Cochrane collaboration databases through August 31, 2016 using the following keywords: dementia, meta-analysis, antipsychotics, antidepressants, anticonvulsants, melatonin, and benzodiazepines. Result: We found a total of 24

meta-analyses that assessed the use of antipsychotics, antidepressants, anticonvulsants, melatonin, and benzodiazepines among individuals with dementia. Sixteen of these meta-analyses evaluated the use of antipsychotics among individuals with dementia. One of the 16 meta-analyses not only evaluated the use of antipsychotics but also antidepressants and mood stabilizers for BPSD. A total of three meta-analyses assessed the use of antidepressants among individuals with dementia, two meta-analyses evaluated the use of mood stabilizers, two meta-analyses evaluated the use of melatonin, and one meta-analysis evaluated the use of melatonin, trazodone, and ramelteon for sleep disturbances among individuals with dementia. There was no meta-analysis for the use of benzodiazepines among individuals with dementia. Data from this systematic review indicates that antipsychotics demonstrate modest efficacy in the treatment of BPSD. Antidepressants appear to improve symptoms of depression among individuals with dementia and may improve some behavioral symptoms among these individuals. Anticonvulsants appear to have no beneficial effects when used in individuals with dementia. Melatonin appears to improve some sleep parameters and some behavioral symptoms among these individuals. Trazodone appears to improve some sleep parameters among individuals with dementia but has not demonstrated efficacy in managing BPSD. The use of antipsychotics and anticonvulsants in this population is limited by their adverse effect profile. Conclusion: Available data indicates that antipsychotic medications have modest efficacy when used among individuals with dementia. Antipsychotics appear to be particularly effective for more severe behavioral symptoms. When using antipsychotics among individual with dementia, strict adherence to the recent APA guidelines should be maintained. Antidepressants appear to improve symptoms of depression among individuals with dementia and may also improve behavioral symptoms among these individuals. Melatonin and trazodone appear to improve sleep parameters among individuals with dementia and may also improve behavioral symptoms. These medications should be used among individuals with dementia in conjunction with non-pharmacological management techniques to optimize outcomes.

No. 97

The Health Effects of Resettlement for Atitecos Post-Hurricane Stan

Poster Presenter: Eun Kyung Ellen Kim
Co-Author: Frances Barg

SUMMARY:

Background: In October 2005, a mudslide following Hurricane Stan took the lives of 652 people and displaced over 5,000 citizens in Santiago Atitlan, a community located in the highlands of Guatemala near Lake Atitlan. Santiago Atitlan is home to a large indigenous Mayan population, of which 94% speak a Mayan language called Tz'utujil and 54% speak Spanish. Following this natural disaster, a neighborhood called Chukmuk was built as a resettled region with financing by the Guatemalan government, USAID, and other international governmental and non-governmental organizations. As part of the Guatemala Penn Partners program, a research team from the Guatemala Health Initiative conducted a large-scale community health survey in 2012. The survey found that respondents from Chukmuk, compared to those from other regions of the city, responded more to feeling unsafe walking outside at night, and feeling sadness and depression. Objective: To further understand the community health survey findings, an ethnographic research project was developed and conducted to examine the relationship between resettlement and health and to further understand the health profile of Chukmuk. Methods: Qualitative, semi-structured interview format was used that asked respondents about life before and after the mudslide, current health, mood, and mental health. Random spatial sampling was used to identify interviewees. A total of forty-nine interviews were conducted between June and July 2013, each interview ranging from twenty minutes to two hours. Each interview was accompanied by a Spanish-Tz'utujl translator, recorded with permission, transcribed into Atlas.ti, and coded using the grounded theory method. Results: Analysis revealed that the term 'depression' is not in the vernacular in this community. Sadness, however, was discussed in the context of thinking often (pensar), feeling nervous (nervios), being alone in the house, household finances, and the mudslide. Some interviewees mentioned physical symptoms,

such as headaches, accompanying sadness. Very few sought medical or mental health care, though many found self-therapy in taking a walk. Some found the interview itself to be therapeutic. Financial security, infrastructure concerns, and transportation were common points of discussion. Male figures were referenced in the context of employment status, finances, and alcohol. Conclusion: Environmental disaster and resettlement can be a source of lingering distress. They can also have lingering mental health effects, even eight years after the event. Understanding the health effects of resettlement can influence policies to benefit the health of others who may experience environmental disasters.

No. 98

Depression in a Quechua-Speaking Rural Population From the Andean Highlands of Peru

Poster Presenter: Maryenela Zaida Illanes-Manrique, M.D.
Co-Author: Syntia Laos-Mejia

SUMMARY:
Background: Depression is a common mental disorders worldwide, the majority studies about depression usually do not represent native communities within their samples. In Peru, very few studies performed in Quechua speaking native communities looking for mental health issues. Aim objective: To explore the cultural understanding of depression in a Quechua speaking population. Methods: Semi-structured interviews were performed in Quechua or Spanish until theoretical saturation according to qualitative methods. Interview transcripts were independently coded by two investigators and analyzed thematically using grounded theory analysis. Results: A total of 30 participants from rural community in the Andean Highlands in Peru. Participants do not have a conceptualization of depression, the Quechua term Llaki describe sadness, however Llaki does not define a depressive disorder. They also Conception of mental disorder could be influenced by other factors such as religion beliefs. Conclusion : Depression conceptualization is linked to cultural aspects, however characteristics such as religious beliefs, could influence this conceptualization as well. Increased understanding the cultural and linguistic barriers, could lead to develop strategies for improving mental health in native communities and increased access to health care services.

No. 99

Volunteering in Mental Health: Views From Different Stakeholders in Europe

Poster Presenter: Mariana Pinto da Costa

SUMMARY:
Introduction: Volunteering can be used to address social isolation in patients with severe mental illness. However, little is known about the views from mental health professionals, volunteers and patients across different countries. This study aimed to explore the views from these stakeholders on the relationships between patients with severe mental illness and volunteers. Methods: This study consisted of an international cross-cultural, cross-languages qualitative study with mental health professionals and volunteers; and a patients' survey in community mental health teams in London carried out through the VOLUME study. Results: 24 focus groups were conducted with 32 volunteers and 91 mental health professionals in three European cities (Porto, Brussels and London); a total of 151 patients were included in this study. A number of preliminary themes have been identified in the thematic analysis: What is the role of the volunteer?; What is the character of the relationship?; How to organize a volunteering scheme?; The impact of volunteering schemes; The potential of technology; and The challenges for volunteering schemes in each country. More than half of patients had not heard about these volunteering schemes, yet more than half were interested in taking part. A preference for the encounters format was for one-hour weekly, with an open-ended relationship; and patients' interest varied between face-to-face and digital volunteering. Conclusions: Different stakeholders support the existence of volunteering schemes. Yet, the variability of preferences suggests that volunteering should be offered in different formats and with enough flexibility to incorporate individual preferences.This work presents research funded by the East London NHS Trust and NIHR (NIHR Programme for Applied Research Programme – RP-PG-0611-20002).

No. 100

Recruitment, Ideology, and Strategic Prevention in Radical Extremism: A Critical Review

Poster Presenter: Aidaspahic S. Mihajlovic, M.D.
Co-Authors: Rebecca Mueller, Kristina Mihajlovic

SUMMARY:

Radical Extremism is an increasingly important issue facing today's global society. Terrorism is a dangerous consequence of such extremism which evolves from a unique set of circumstances and brings a distinct type of harm during each event. Organizations as diametrically opposed in dogma as the Islamic State of Iraq and the Levant (ISIL) and the Aryan Nation continue gaining power and influence internationally and here in the United States. This literature review aims to understand the recruitment strategies and ideologies commonly employed by radical extremist groups, with the ultimate goal of developing various clinical applications to counter their methods and prevent their growth. It searches for commonalities in new member development across domestic and international groups with even starkly different agendas. It additionally examines the use of the media, including online resources, in recruitment and dissemination of "process narratives". Fourteen articles and one memoir were reviewed by three people. Inclusion criteria for this search included the following keywords: counternarrative, terrorism, Islam, White Power, radical extremism, prevention of radicalization, media usage. Articles were excluded if written by current members of radical extremist groups or if published before September 11, 2001. Key excerpts from selected works will be listed on the poster. To summarize, many radical extremist groups carefully craft narratives to present their ideologies. They frequently invite their prospective members to join in the story by portraying them as victims. In contrast, members of the organizations are depicted as heroes who fight the injustice of their respective societies by partaking in ultra-important missions, often involving retribution for past wrongs. Many groups use websites and other multimedia resources to cater to vulnerable adolescent populations. Based off the literature reviewed, individual anti-radicalization counter-measures should focus on countering the perceptions of victimization, undermining the "champion" narrative, and emphasizing non-violent alternatives. A common recruitment strategy was providing prospective members with a sense of importance and purpose. In the clinical setting one should provide options that can fulfill the psychological needs of closure, sense of identity/belonging and personal significance. Understanding these various strategies will allow for improved patient care particularly with adolescent psychiatric behavior within at-risk community members.

No. 101

Hurricane Harvey—Its Consequences on Immediate Care for Patients on ECT: A Case Report

Poster Presenter: Kelin M. Ogburn, M.D.
Co-Authors: Melissa Holmes, Nikhil Dhawan, Joseph Mansfield, D.O.

SUMMARY:

Mr. R is a 30yo male with diagnosis of Schizoaffective disorder who had been recently hospitalized for severe mania with psychosis, had failed multiple medications, and only responded to ECT. When Hurricane Harvey severely affected his hometown, he had to evacuate and sought shelter with relatives in another county. He was unable to continue his routine outpatient ECT treatment as both the clinic and his home were flooded. He quickly decompensated, becoming psychotic and paranoid and presented to our hospital a few days after his evacuation, admitted involuntarily for treatment. Our hospital is not equipped with ECT and not immediately available. One solution, would be to transfer to private hospital nearby that provides such treatment, however patient was only covered by a medical assistance program in his county. With this unexpected situation, the patient was left without access to the treatment that best worked for him. When a natural disaster happens, there can be serious immediate consequences on patients with severe mental illness that require intensive outpatient care or specialty care, like ECT. Despite all the efforts to support the evacuees and other counties opening their hospital doors to accept these patients, it does not mean they will be able to receive the specialty care they need. Multiple counties provide their own medical programs coverage that are geographically restricted. They

may be inaccessible in natural disaster situations. In summary, the points for reflection include: 1. Outpatient clinic inaccessible due to extreme force of nature, resulting in rehospitalization. 2. ECT treatment unavailable 3. Funding assistance restricted to one county 4. Safe transport options to return to county limited

No. 102
WITHDRAWN

No. 103
Anxiety, Depression, and Symptom Control in Adult Patients With Asthma
Poster Presenter: Pratik Jain, M.D.
Co-Authors: Umma Kulsum, Kelly Cervellione, Tofura Ullah, Adam R. Chester, D.O., Craig Thurm

SUMMARY:
Mood and anxiety disorders are well-known barriers to successful asthma self-management. Significant psychological dysfunction has been linked to asthma exacerbation and higher healthcare resource utilization. Despite the known association, we hypothesized that symptoms of anxiety and depression are still underappreciated in patients with asthma and that they are correlated with self-perceived asthma control. A prospective survey study was conducted to determine the association between asthma symptom severity and symptoms of depression and anxiety. Consecutive English-speaking patients being seen by a pulmonologist who had an asthma diagnosis for at least 6 months were included. Demographic and clinical characteristics were collected. Patients completed the Asthma Control Test (ACT), the Beck Anxiety Inventory (BAI) and the Patient Health Questionnaire-9 (PHQ9). ACT scores range from 5 to 25; higher scores indicate better self-perceived asthma control. BAI scores range from 0 to 63; higher scores indicate more severe symptoms of anxiety. PHQ9 scores range from 0 to 27; higher scores indicate more severe depressive symptoms. Fifty-nine patients were included [female=78%; age, mean (SD)=55(15) years; Caucasian ethnicity=14%]. Forty-one percent of patients scored mild to severe for symptoms of depression, with 22% scoring greater then 10, indicating high suspicion for clinical depression. Seventeen percent of patients scored mild to severe for symptoms of anxiety. Overall mean asthma control score was 15.8 (5.2); 64% scored less than 19, indicating poor self-perceived asthma control. Scores between the PHQ9 and ACT had a correlation of -.37 (p=.004) and between the BAI and ACT had a correlation of -.48 (p<.001). The majority of patients with significant symptoms of anxiety or depression were not currently receiving treatment for these symptoms. ACT scores were not associated with healthcare resource utilization measures, such as number of exacerbations, ER visits , or hospitalization in the past year. Symptoms of anxiety and depression are common in patients with asthma. Increased symptoms of anxiety and depression are associated with worse self-perceived asthma control. This could be due to the asthma patients' over-perception of respiratory symptoms during ambiguous situations where respiratory symptoms could occur. The relationship between asthma and anxiety has been shown to be bi-directional. Cognitive behavioral therapy has been shown to reduce anxiety in patients with asthma. Attention to psychological symptoms could aid in the treatment of poorly-controlled asthma.

No. 104
Provider and Staff Perspectives on a Mental Health Integrative Care System Within Primary Care at a Large Academic Medical Institution
Poster Presenter: Maria C. Prom, M.D.
Co-Authors: Katherine Barnett, M.D., Dennis Sunder, Lauren Ng, Ph.D.

SUMMARY:
Background: Research evidence increasingly supports the delivery of mental health care through integrative care systems within primary care practices. As the implementation of integrative systems expands, there is a need to reflect on real-world application and engage in continuous evaluation and improvement of programs. This qualitative, cross-sectional study examined provider and staff perspectives of the current system of integrated care within primary care clinics at a large academic medical institution to better understand and define the system, areas for improvement, methods for implementing change, and differences in provider and staff perspectives. Methods: Semi-structured qualitative interviews were conducted

with twenty-two health providers and staff within the integrative mental health care system in both general internal medicine and family medicine clinics, as well as psychiatry. Participants included primary care providers, practice managers, psychiatrists, and behavioral health social workers. The interview consisted of open-ended questions with topics focusing on the current state, purpose, benefits, implications, and areas of improvement of integrated care. Results: The findings illustrated similarities and differences in provider and staff perspectives in several areas of integrative care. Major themes included defining integrative care, the application of integrative care, provider and patient benefits, challenges to implementation and care provision, team dynamics, patient characteristics, institutional and health systems implications, and suggestions for change and systems of evaluation. Participants generally found the integrative care system to be an improvement over no integrative care in terms of access and availability of services and resources for patients and providers, primary care provider support, and reduction of stigma. Many felt that the system was better suited for low to moderate severity of illness, particularly in the areas of life stresses, depression and anxiety. Perspectives on areas of limitation were variable, but consistent themes included system access, provider availability, provider-provider communication, utilization of services, models of integration, service availability, and institutional resources. Conclusions: This qualitative evaluation provides integrative care provider and staff perspectives on the implementation of an outpatient integrative care system within several primary care clinics at a large academic institution. The information gained provides a deeper understanding of current practices and will inform practice changes to improve the current system. The findings of this study can also inform other institutions who may be considering or are in the process of developing outpatient integrative care systems.

No. 105

Integrating Primary Care in Behavioral Health

Poster Presenter: Neelambika Sharanabasa Revadigar, M.D.

SUMMARY:

Introduction Approximately 68 percent of adults with a mental disorder have at least one general medical disorder (National Comorbidity Survey 2003). Robinson and Reiter noted in 2007 that as many as 70 percent of primary care visits stem from psychosocial issues. While patients typically present physical health complaints, data suggest the underlying mental health or substance use issues often trigger these visits. Unfortunately, most primary care doctors are ill-equipped or lack the time to fully address the wide range of psychosocial issues that afflict these patients. Here we present one modality for the determination of integrative care needs. Furthermore, we discuss proposed solutions for the key needs and challenges. Using “survey monkey”, a survey instrument was developed. Resident psychiatrists at a New York State psychiatric hospital were asked to complete the survey to identify areas of need for integrated care. Data collected from the survey were then analyzed using descriptive statistics. Results ? 60% of survey participants had an average of 11-20 patients with medical comorbidity ? Diabetes, hypertension and obesity were the most frequent medical comorbidities ? 25% of patients had substance use comorbidity ? 50% of patients had a primary care provider (PCP) ? Transportation was the most significant barrier to follow up with PCP Conclusion ? A significant percentage of Americans suffer from mental illness and comorbidity medical illness often resulting in reduced life expectancy ? The survey result supports a need for integrated care to improve outcomes Next Steps ? Conduct survey in all state facilities ? Develop appropriate integrated care model

No. 106

Perceived Stress, Coping Mechanism, and Prevalence of Depression and Anxiety Among Soldiers Serving in Eastern Nepal

Poster Presenter: Mandeep Kunwar, M.D.
Co-Authors: Nisha Manandhar, Atit Tiwari, Nidesh Sapkota

SUMMARY:

INTRODUCTION: Apart from normal challenges in civilian life, being a soldier demands hierarchic and disciplinary structure along with tiresome physical, mental and emotional commitments. These

individuals are more prone to develop different psychiatric disorders. The objectives were to study the perceived stress, coping mechanism and prevalence of depression and anxiety among soldiers serving in Eastern Nepal. METHODOLOGY: This was a cross-sectional study carried on a total of 314 soldiers serving in Eastern Regional Armed Police Force headquarter, Baraha Brigade located at Pakali, Sunsari of Eastern Nepal.Eastern Regional Armed Police Force Headquarter, Sunsari has strength of 450 allocated soldiers, however 314 soldiers could be included in the study, excluding those who were stationed away from the brigade and those who refused to give consent for the study. Perceived stress, coping mechanism and prevalence of depression and anxiety were assessed by using Perceived Stress Scale, COPE Inventory, Beck Depression Inventory and Beck Anxiety Inventory respectively. Appropriate statistical tools were applied as accordingly. RESULTS: There were 85.0% of male and 15.0% female soldiers. Most of the soldiers were between age group of 30-34 years (29.0%) and were married (87.9%). Low perceived stress were reported by 47.13% whereas 52.55% and 0.32% reported to have moderate and severe level of perceived stress respectively. Most frequent coping mechanism used were religious coping (83.4%), mental disengagement (82.2%) and restraint (81.5%). Almost 27.4% of the soldiers showed some types of mood disorders: (borderline clinical depression- 10.5%, moderate depression-12.7%, severe depression-3.2%, extreme depression 1%). Similarly, low, moderate and severe anxiety were reported by 47.1%, 11.1% and 1.6% of soldiers respectively. Gender, socioeconomic status and alcohol consumption were significantly associated with depression and anxiety. There was also significant association between perceived stress with depression and anxiety. Similarly, anxiety and depression also showed significant association between them. CONCLUSION: In this study, more than half of soldiers reported to have moderate to severe level of perceived stress and had multiple coping skills adapted. Depression and anxiety were prevalent, mostly in the milder level.

No. 107
Understanding the Role of Veterans' Family Members in Suicide Prevention

Poster Presenter: Sharon Alter
Co-Authors: Sarah R. Sullivan, M.S., Angela P. Spears, B.S., K. Nidhi Kapil-Pair, Marianne Seligson Goodman, M.D.

SUMMARY:
Suicide is the 10th leading cause of death in the United States. Despite increased recognition and enhanced safety measures within the VA, such as suicide safety planning (SSP-Stanley et al., 2008), 20 Veterans a day die from suicide. Theory and research suggest that patients often feel burdensome to their families and families lack information and/or feel stigma associated with suicide, which hinders communication. Method: Thirty Veterans and 30 family members/caregivers participated in qualitative interviews at the James J. Peters VA Medical Center. All veterans were receiving mental health services, and had a history of suicidal attempts. Additionally, the qualitative interviews were designed to assess both the extent of family members' involvement in Veterans' safety planning. Inclusion criteria for Veterans included: 1) able to give consent, 2) 18 years or older, 3) endorse a previous suicide attempt, and 4) English-speaking. Veterans responded to questions about disclosure of attempts, and experience or anticipation of family responses; while family members responded to questions about ability to identify triggers and communicate salient concerns, as well as willingness to participate in a dyad treatment. Interviews were analyzed using qualitative thematic content analysis. Two doctoral level investigators served as primary coders. Multiple codes emerged and were grouped into five major themes for Veterans, and four themes for family members. Results: Veteran themes pertained to: 1) sadness, "I was in a black hole of sadness;" 2) isolation, "I have a big family but it's like I have none;" 3) shame, "deep down a part of it is shame;" 4) perceived burden, "I felt like a burden, I wanted to reach out but didn't;" and 5) mistrust, "they'll flip out or won't understand." Family themes revealed: 1) perceived inability to stop their loved one from hurting themselves, "it's hard for me to find out things that's going on with him; he keeps it to himself a lot;" 2) fear of triggering urges; "I never know how he'll react;" 3) feeling unsupported, "there's no real support;" and 4) feeling overwhelmed, "I didn't know what to do."

Conclusions: Thematic data identified existing perceptions, which may prevent successful communication about suicidality between patients and families. Overall, while Veterans felt alone, isolated, and apprehensive about reaching out to family members, family members likewise did not know how to support and/or react to their Veteran's suicidality. This qualitative work showed a potential gap in current suicide prevention research, and has potential implications for dyad treatment.

No. 108

The Relationship of Sleep Quality and Posttraumatic Stress in Sexual Assault Survivors Within a Veteran Population

Poster Presenter: Angela P. Spears, B.S.
Co-Authors: Sarah R. Sullivan, M.S., Rachel Harris, Marianne Seligson Goodman, M.D.

SUMMARY:
Introduction: Approximately 33% of the general population suffers from insomnia. Research suggests that sleep problems may be more prevalent in Veterans. 41.7% of Veterans meet criteria for insomnia. Researchers have found that sleep disorders more severely affect those who have experienced traumatic life events. One traumatic event significantly understudied is male sexual assault. Even less understood are the effects and role of sexual assaults on health outcomes, such as sleep. The purpose of this poster is to study the relation between sexual assault and sleep problems in predominantly male veterans. Method: Chart reviews were conducted through Computerized Patient Record System (CPRS) to obtain diagnostic information. To measure sleep the Insomnia Severity Index asks participants to rate the nature and symptoms of their sleep problems using a Likert-type scale. Questions relate to severity of symptoms, satisfaction with sleep patterns, degree to which insomnia interferes with daily functioning, and overall level of distress created by sleep problems. Additionally, the instrument used to obtain information on traumatic life events was the Life Events Checklist (LEC-5). The LEC-5 is a 17-item self-report questionnaire relating to events experienced during one's lifetime. The respondent answers if each traumatic event occurred. For this analysis we only reviewed the prevalence of one traumatic event, sexual assault. Results: Twenty-two Veterans (21 male, 1 female) were studied as part of a trial for suicidal Veterans. Veterans who completed the assessment had a mean age of 58.53 (ranging from 35-84). Additionally, the participants were racially diverse (11 African American, 5 White, 2 Native American, 4 Other). PTSD among all Veterans in this sample was 45.45%. Conversely, 57.14% of Veterans' sexually assaulted, had PTSD. When examining sleep problems, 71.4% of participants who had experienced sexual assault reported being very much distressed about their current sleep problems, where the participants who did not report sexual assault were also not worried about their current sleep problems. When examining the extent to which the Veterans considered their sleep problems to interfere with their daily functioning 85.7% of Veterans sexually assaulted reported it very much interfering with their daily functioning, whereas only 33.33% of Veterans not sexually assaulted reported their sleep problems as very much interfering. Results will be updated with additional data. Discussion: Preliminary results indicate sexual assault and sleep problems may be related. In this sample, specific traumatic experience of a sexual assault is related to more distress and interference in these Veterans everyday lives as noted by higher frequencies of PTSD in those sexually assaulted. Past research suggests that sexual assault is associated with sleep problems possibly due to its relation with PTSD. This is congruent with our data as more Veterans who had experienced sexual assault were diagnosed with PTSD compared to Veterans who had not. Little research to date has examined sexual traumatic events in predominately male military personnel. These results have implications for further research and practice as more targeted treatments may be developed for this population.

No. 109

Gender Differences Related to Sleep Problems in Caregivers of Veterans With Suicidality

Poster Presenter: Sarah R. Sullivan, M.S.
Co-Authors: Angela P. Spears, B.S., Marianne Seligson Goodman, M.D.

SUMMARY:
Introduction: Approximately 33% of the general population suffers from insomnia. However,

research suggests that caregivers in particular often have sleep problems with some studies finding up to 95% of caregivers with severe sleep problems. This issue is critical to understand not only for the caregivers' health themselves, but also for the imperative role in influencing patients' prognosis and rates of suicide these caregivers provide. Further, research suggests that women often report poorer sleep when compared to men. This is especially salient as the majority of caregivers are women, but recent research has begun to explore the role of male caregivers. Male caregivers have risen from 34% in 2009 to 40% of the nearly 65 million family caregivers in the United States today. The purpose of this poster is to compare the perception of sleep between male and female caregivers of Veterans. Method: To measure sleep the Insomnia Severity Index asks participants to rate the nature and symptoms of their sleep problems using a Likert-type scale. Questions relate to severity of symptoms, satisfaction with sleep patterns, degree to which insomnia interferes with daily functioning, and overall level of distress created by sleep problems. Participants were taken from a randomized clinical trial exploring suicidal Veterans and their caregivers. Results: Thirteen caregivers (6 male, 7 female) were studied. Caregivers who completed the assessment had a mean age of 47 (ranging from 24-66). Additionally, the participants were racially diverse (8 African American, 2 White, 1 Native American, 2 Other). When examining sleep problems, 57% of female participants reported no difficulty falling asleep or staying asleep. However, 66% of men reported moderate to very severe difficulty falling asleep and staying asleep. Additionally, 57% of females reported not being worried about their quality of sleep and do not feel that it impairs their quality of life. Conversely, only 16% of males were not at all worried about their sleep problems and did not feel it impaired their quality of life. Results will be updated with additional data. Discussion: Preliminary results indicate male caregivers may be at higher risk for sleep problems than previously believed. In this sample, males were more likely to report poor sleep and were more worried about their sleep when compared to women. Further, this sample in particular had a high rate of male caregivers with 46% being male. Research suggests that this large population of male caregivers may be indicative of current caregiving trends. Therefore, it is important for further research and practice to examine insomnia in male caregivers. Specifically, past research on female caregivers has indicated that perceived burdensomeness and symptoms of depression and anxiety relate to poor sleep. This may also be true for male caregivers suffering from insomnia.

No. 110

Lofexidine Efficacy and Safety in Opioid Withdrawal: Pooled Analysis of Phase 3 Studies

Poster Presenter: Carlos Francisco Tirado, M.D., M.P.H.

Co-Authors: Mark Pirner, Thomas Clinch, Charles Gorodetzky

SUMMARY:

Background: Lofexidine (LFX) is a non-narcotic, alpha-2 adrenergic agonist currently in clinical development to treat opioid withdrawal symptoms and facilitate completion of opioid discontinuation. Methods: This analysis included data from 2 phase 3 placebo-controlled studies that evaluated withdrawal symptoms during the first 7 days of withdrawal from short-acting opioids (heroin or opioid analgesics). Subjects were opioid-dependent men or women =18 years old. In the first study, subjects were randomized to placebo (PBO) or LFX 3.2 mg/day (0.8mg QID) for 5 days. In the second study, subjects were randomized to placebo, LFX 3.2 mg/day (0.8mg QID) or LFX 2.4 mg/day (0.6mg QID) for 7 days. In the pooled data, 586 subjects were randomized to LFX and 281 subjects were randomized to PBO. SOWS-Gossop (SOWS-G) was used to assess severity of withdrawal symptoms. Results: In the intent-to-treat population, 242 subjects in the LFX group (41.3%) and 77 subjects in the PBO group (27.4%) completed the double-blind treatment period. Subjects in the LFX group stayed longer in the trials than those on PBO. The most frequently reported reasons for premature discontinuation were consent withdrawn (LFX, 29.0%; PBO, 32.4%) and lack of efficacy (LFX, 15.7%; PBO, 31.7%). The LS means for SOWS-G score over Days 1-7 was lower in both LFX dose groups compared with PBO ($p<0.05$), indicating greater reduction in withdrawal symptoms with LFX. The peak SOWS-G score over Days 1-5 was also

significantly lower in the LFX groups than in the PBO group, both when actual data were analyzed and when actual or imputed data were analyzed. Differences between the LFX and PBO groups for SOWS-G mean scores were clinically important. All other secondary and exploratory endpoints (e.g. OOWS, COWS, VAS-E, SOWS-Handelsman, MCGI Subject and Rater) were consistently positive or trending in favor of LFX. Most adverse events (AEs) were mild or moderate in severity. Treatment-related AEs that were reported at a higher rate (by at least 5% of subjects) in the LFX group compared with PBO were hypotension, orthostatic hypotension, bradycardia, dizziness, somnolence, dry mouth and sedation. Serious AEs (SAEs) were low in these studies: 2.3% in the LFX group and 3.2% in the PBO group. Most SAEs were related to hypotension, bradycardia or brief prolonged hospitalization to stabilize withdrawal symptoms in subjects who prematurely withdrew from the trial. LFX was associated with small, clinically insignificant, transient prolongation of the QTc interval of the ECG. Conclusions: These data suggest that LFX can be safely administered at 3.2 and 2.4 mg/day, LFX reduces opioid withdrawal symptoms to a clinically meaningful extent, and LFX facilitates opioid discontinuation treatment.

No. 111

The Evaluation of Opioid Use in Patients With Mental Health Disorders: A Pharmacogenetic Perspective

Poster Presenter: Sanjeda Chumki, Pharm.D.

SUMMARY:

Purpose: The rise of prescription opioid drug use in patients with mental health disorders has become more prevalent in society. It has been estimated that among 38.6 million Americans with mental health disorders, 18.7% use opioids. Studies have shown that adults with mental health disorders are at risk for opioid abuse, and are less likely to cope with chronic pain. This often leads to physicians overcompensating the symptoms of mental health disorders and overprescribing opioids. Genetic factors contribute to patient variability in response to specific drugs. Pharmacogenomics testing is a promising tool that can be utilized to determine risks associated with such prescribing behavior, address the underlying causes of dependency, and optimize treatment regimens. Method: In this retrospective study, 2,129 mental health disorder patients who have taken a 50-gene pharmacogenomics test were identified. Data was curated from Sept. 2016 to Aug. 2017 using the Admera Health Laboratory Information System database. Results: The primary objective of this study was to investigate the prevalence of opioid use in patients with mental health disorders. The secondary objective was to demonstrate the utility of pharmacogenomics testing in the selection of medication by identifying genetic biomarkers. Patient samples originated across institutions and clinics. 9.8% of patients with mental health disorders (mean age= 45, 38% male, 62% female) were identified as opioid users. Pharmacogenomics knowledge resource stated 84.5% of patients were taking opioids associated with the highest level of evidence. Testing recommendations included: consider alternatives (10.2%), dose recommendation (12%), proceed with caution (2.9%), and normal response expected (55%). Analysis identified thirteen different opioids being prescribed, the most common being Tramadol, Oxycodone, and Hydrocodone/Acetaminophen. The most frequently variants occur in CYP2D6, CYP3A4, OPRM1. Concurrently, the most common types of mental health illnesses in this population included bipolar disorder, depression, and anxiety. Conclusion: Pharmacogenomics testing offers a growing potential to individualize drug therapy and improve clinical outcomes. It examines genetic variations that dictate drug response, predicting whether a patient will have a good, a bad or no response at all; leading to prescribers understanding the reason patients react differently to various drugs. Moreover, providers will identify patients at genetic risk of opioid misuse, further explaining and predicting the clinical responses seen with opioids and adjuvant medications. Ultimately, this understanding will shift the medical paradigm to individualize therapeutic regimens to better cater to the patients' medical needs.

No. 112

A Evaluation of the Efficacy, Safety, Dose Response, and Costs Associated With the Treatment of Chronic Pain With Medical Marijuana in Outpatients

Poster Presenter: Terrance Bellnier
Co-Author: Tulio Roberto Ortega, M.D.

SUMMARY:
Objective/Purpose: To evaluate the efficacy, safety and dose response of medical marijuana (MM) as a treatment for chronic pain in ambulatory patients. Method: Institution Review Board approval was given to conduct this retrospective chart review. All patients meeting inclusion criteria and no exclusion criteria were included and served as their own controls. The EQ-5D quality of life, Pain Quality Assessment Scale (PQAS) factor analysis, GAD-7 Anxiety, and PHQ-9 Depression were used to measure clinical outcomes. Safety was measured with an Adverse Effect check list. Records were reviewed for 6 months prior to MM initiation (Pre) and 6 months post exposure to MM use (Post). Kruskal-Wallis for analysis of variance and Wilcoxon-signed rank test for significance were used. Results: 46 ambulatory patients were identified with a diagnosis of chronic pain. Patient demographics included: age 52+/- 10, 100% Caucasian, 27 females, 19 males, duration of illness 18 +/- 9 years. Clinical outcome: EQ-5D (Pre 31 – Post 72, P<.0001), PQAS Paroxysmal (Pre 7.02 – Post 2.12, P<.0001), Surface (Pre 5.20 – Post 1.49, P<.0001), Deep (Pre 6.67 – Post 3.13, P<.0001), Unpleasant (Pre "miserable" – Post "annoying", P<.0001), GAD-7 Anxiety.(Pre 4.81-Post 2.83, P<.0001), and PHQ-9 Depression (Pre 3.97-Post 3.37, P<.001) Service utilization: pain medication cost (Pre $375.90– Post $226.40, P<.05). Safety: morphine equivalents (Pre 79.94– Post 18.53, P<.05). Adverse effects were reported in 9% of subjects. No subjects reported euphoria. Conclusion: Due to study limitations, these results may not be applicable to the general population. The present study provides evidence that medical marijuana is effective, well tolerated and cost effective for chronic pain. In addition, the observed analgesic dose appears to be significantly lower than the euphoric dose in our subjects. A large simple trial or a randomized placebo controlled clinical trial is warranted to further evaluate the role of medical marijuana in the treatment of chronic pain.

No. 113
Treatment of Schizophrenia in 22q11.2 Deletion Syndrome

Poster Presenter: Lily Van, M.D.
Co-Authors: Anne Susan Bassett, M.D., Eva W. C. Chow, M.D., Sarah Malecki

SUMMARY:
Background: One in four individuals born with 22q11.2 deletion syndrome (22q11.2DS) develops schizophrenia, and ~0.5-1% of individuals with schizophrenia in the general population has the associated 22q11.2 deletion. This is the strongest known molecular genetic risk factor for schizophrenia. Current guidelines for 22q11.2DS recommend, as for other associated conditions, standard management for schizophrenia, including treatment with antipsychotic medications. However, there is a paucity of literature on the prescribing pattern of antipsychotic medications and comorbid metabolic illness in this patient population. Methods: We investigated 97 adults with 22q11.2DS and primary psychotic disorder (schizophrenia or schizoaffective disorder) per DSM-V criteria. We utilized a cross-sectional data analysis and review of lifetime psychiatric records to determine antipsychotic usage, antipsychotic polypharmacy, anticholinergic medication use, and concurrent treatment of metabolic diseases. Results: The mean age of the 97 adults with lifetime history of primary psychotic disorder and 22q11.2DS was 37.6 (SD 12.8) years. The mean duration of psychotic illness was 16.8 (SD 10.8) years. There were 89 (91.8%) individuals on antipsychotic medications, and of these, 17 (19.1%) were on clozapine. Thirty-four (38.2%) were prescribed more than one antipsychotic medication, 6 of whom were prescribed more than two antipsychotics. The prevalence of antipsychotic polypharmacy in this population was significantly higher than that reported in a large Canadian study of schizophrenia ($p<0.001$). Individuals on two or more antipsychotics were significantly more likely to be prescribed anticholinergic medications ($p=0.03$). There was concurrent prescription of antihyperglycemic medications (eg, metformin, insulin) in 10 (11.2%) patients and treatment of dyslipidemia (e.g., statin) in 8 (9.0%) patients. Individuals on an antihyperglycemic agent had significantly higher BMI ($p<0.001$) than those not on these agents. Conclusion: To our knowledge, this is the largest study to report on antipsychotic usage and comorbid

treatment of metabolic disease in patients with 22q11.2DS. Our group has previously reported elevated risk of obesity in the 22q11.2DS population independent of antipsychotic usage. The current study sheds further light on the management of psychotic illness in this high-risk genetic population, including evidence for high rates of treatment-resistance and antipsychotic polypharmacy. The results emphasize the need for further data on the pathophysiology and treatment of psychotic illness in this genetic subtype of schizophrenia as we improve our ability to diagnose genetic conditions and move towards personalized medicine in psychiatry.

No. 114

Context Dependent Cranial Nerve I Dysfunction

Poster Presenter: Khurram Janjua
Co-Authors: Alan Hirsch, Salma Ferouz

SUMMARY:

Introduction: A patient, who perceived, on the same day, an aroma dysosmic in one location and the same odor normosmic in another location, has not heretofore been reported. Method: Case Study: A 57-year-old right-handed male, three years prior to presentation, noted the gradual onset of smells "bothering" him. Initially, this was due to cigarette smoke, but over time intensified and generalized to all strong odors. Upon exposure he would experience fullness in both nostrils for five minutes followed by the taste of the odorant and a headache, which would last eight hours. He observed that the smell of "Tide Free and Gentle" Laundry Detergent would posses a normal odor when opening the bottle and sniffing it in the grocery store. However, about 30 minutes later, upon re-exposure to the odor in his home, the detergent had acquired a distorted quality similar to that of "dry cleaning," inducing nausea. Accompanying the scent was a concurrent taste of dry cleaning. Re-exposure to the same detergent the next day at the supermarket was perceived as normal aroma, but when brought home, it again was perceived as the distorted dry cleaning smell. Results: Abnormalities in neurologic examination: Motor: Bilateral intrinsics of hand: 4/5. Drift testing: Mild left pronator drift with abductor digiti minimi sign. Gait: Mild right foot drop. Sensory: Decreased light touch and pinprick bilateral lower extremities distally. Rydell-Seiffer Vibratory Sense Evaluation: Absent in both lower extremities. Reflexes: Areflexia. Chemosensory Testing: Olfaction: Quick Smell Identification Test: 3 (normosmia). Pocket Smell Test: 3 (normosmia). Brief Smell Identification Test: 9 (normosmia). Retronasal Smell Testing: Retronasal Smell Index: 4 (abnormal). CT Scan of brain and sinus: Normal. Discussion: This may be a physiologic phenomenon as a result of environmental effects. For instance, higher pressure, humidity or temperature in the home compared to the store environment may change olfactory perception, since all of these increase olfactory ability (Yakov, 2013) (Dumlao, 2010). Such increase in a pathological olfactory system may cause some components of aroma to be enhanced, thus distorting the perceived aroma. The perceived dysosmic aroma may be due to an additive or synergistic effect of the detergent aroma mixed with the ambient domicile odor. Psychological features may function to change the quality of the odor as seen with expectation effect (Deliza, 1996). Possibly the halo effect of emotions related to other household members may be integrated and transferred into the detergent aroma (Nisbett, 1977). Alternatively, change in affect from the comfort of being at home may influence olfaction; similar to affect modulation of phantosmia or affect induced change in olfactory perception (Yakov, 2013) (Dumlao, 2010). Further investigation as to constancy of dysosmia and the influence of contexts in others who suffer from chemosensory disorders is warranted.

No. 115

Unilateral Burning Mouth Syndrome: Colocalization With Dysgeusia

Poster Presenter: Khurram Janjua
Co-Author: Alan Hirsch

SUMMARY:

Introduction: While unilateral Burning Mouth Syndrome (BMS) has been observed (de Tommaso, 2010) and unilateral dysgeusia has also been described (Jang, 2007), the colocalization of unilateral BMS and unilateral dysgeusia has not heretofore been reported. Methods: Case Study: Eight years prior to presentation, this 60-year-old woman developed BMS, which lasted for 3 months

and spontaneously resolved. Six months before presentation, she noted hot coffee would burn her mouth. Five months prior to admission, she then lost her ability to smell and taste especially sweet, and everything tasted sour. Taste ability has been at 25% of normal, other than sweet which is at 70%, while everything else tastes altered with a sour aftertaste. Soon thereafter, she had a dental extraction followed by an increase in the intensity of burning pain. The pain involves the tongue (right and center of palate) accompanied by a gritty sandpaper-like sensation. The burning is a level 5/10 in intensity and progressively worsens throughout the day. Her symptoms worsen with consumption of citrus, coffee and most foods, and thus she can only eat bananas, noodles and ice cream. As a result, the patient suffered a 20 lb. weight loss. Phantogeusia, metallic taste, and burning pain persist everyday with 7/10 in severity. It is unresponsive to variety of medications, steroids, antifungals, mouthwash, and acyclovir. Burning mouth pain is made less intense with chewing gum and using dental wax. The patients' burning solely appears on the right side. It is on the same side where taste is distorted. For instance, wine tastes bad and sour on the right tongue, but in the left tongue tastes normal. Carbonated flavor water (Ice) on the right side tastes chemical-like, whereas the left tastes normal. Discussion: The colocalization of hemi-dysgeusia and hemi-BMS suggests a common etiology and physiology of these conditions. The dysgeusia may represent a dysfunctional taste, which is the manifestation of actual reduced taste. This would confirm Grushka's hypothesis and Hirsch's findings that in BMS, taste inhibits pain (Grushka, 1986) (Hirsch, 2010), and that the primary abnormality in BMS is taste loss (Grushka, 1986). The above suggests that further exploration of treatment in BMS with agents that enhance taste perception is warranted.

No. 116

Burning Mouth Syndrome Related to Posture

Poster Presenter: Khurram Janjua
Co-Authors: Vik Guliani, Jasir Nayati, Pullave Salaria, Alan Hirsch

SUMMARY:

Introduction: A number of sensory systems are sensitive to body position. However, no description of posture dependent Burning Mouth Syndrome (BMS) has been described. A case is reported. Methods: Case Study: A 60-year-old right-handed female, eight years prior to presentation, noted the onset of constant burning of her mouth and tongue that worsened as the day progressed. Over a three month time period this gradually resolved. Six months prior to presentation she noted recurrence of her burning mouth. Her burning pain continued and worsened with exposure to odors including soap, perfume, the aroma of laundry, coffee, and raw onions. Her pain was made worse when she would touch her tongue to her teeth. The pain was in the center of her tongue and palate, and in the right front of the tongue. The burning worsened as the day progressed. The burning pain is constant and is a 9/10 in severity when sitting or standing. When in a supine position the BMS pain drops to a 5/10 in severity. No other change in position affects the intensity of the pain. Results: Chemosensory Testing: Olfaction: Brief Smell Identification Test: 9 (normosmia). Alcohol Sniff Test: 23 (normosmia). Pocket Smell Test: 3 (normosmia). Quick Smell Identification Test: 3 (normosmia). Retronasal Smell Testing: 7 (normal). Gustation: Propylthiouracil Disc Taste Test: 6 (normoguesia). Taste threshold: normogeusia to sodium chloride, hydrochloric acid, urea, and phenylthiocarbamide. Ageusia to sucrose. Discussion: The mechanism by which posture impacts upon burning mouth is unclear. Since lying down impairs olfactory ability (Lundstrom, 2007) and odors may exacerbate BMS (Hirsch,2005), lying down may improve BMS by functionally inhibiting olfaction and thus reducing the effect of any exacerbating odors. Alternatively, the supine position may induce a pavlovian reduction in muscle tone and associated anxiolysis. Since anxiety worsens pain, reduction of anxiety through position change may thus secondarily reduce the pain. Possibly the act of lying down is a distractor, causing the patient to focus on the position rather that the pain. Moreover, lying down may have acted to reduce level of alertness , and if the pain was state dependent, it may act to reduce associated burning. Possibly parotid flow rate could change in the supine position, and thus cause drying of the mouth and improvement of the pain (Schneyer, 1956). Laying supine may change the firing, rate of proprioceptive

nerve fibers and therefore, through Melzack and Walls Gate Control Theory of Pain, inhibit c fiber firing, resulting in a reduction in burning pain (Melzack, 1965). Given the above, a trial of supine repose in those with BMS is warranted.

No. 117

The Relationship of Overlapping Symptoms in BPD, Asperger's, and Autism Individuals and Families: Implications for New Perspectives on Treatment

Poster Presenter: Valerie Porr

SUMMARY:

TARA4BPD is an education and advocacy organization dedicated to motivating new, innovative research on Borderline Personality Disorder (BPD). Data derived from TARA's national helpline callers indicates that Autism Spectrum Disorders are sometimes diagnosed in the same families where someone meets criteria for BPD. For example, a family with twins reported one twin was diagnosed with BPD while the other was diagnosed with Autism. These observations seem to indicate that BPD and Autism Spectrum Disorders (ASD) may occur on a spectrum in families with a possible genetic connection. When BPD Helpline callers provide us with their family history, they sometimes report behaviors in other family members that are commonly associated with ASD, yet the family is unaware of this possible connection and no formal diagnosis of Autism Spectrum Disorder has been considered. Helpline callers questioning the possibility of a BPD diagnosis in a loved one may actually be describing behaviors that correspond with behaviors generally associated with Autism or Asperger's Syndrome, (difficulty recognizing faces, difficulty naming emotions (alexithymia), hyper-sensitivity to sensory stimuli such as light, sound, textures, smells, touch, difficulty mentalizing others, interpersonal relationship difficulties). Our observations seem to point towards a familial relationship between BPD and Autism Spectrum Disorders, with or without a diagnosis. TARA developed an online survey, Exploring the relationship between BPD, Asperger's Syndrome, and Autism, so as obtain data to confirm the relationship between these two greatly misunderstood disorders for researchers and clinicians. A literature review of Borderline Personality Disorder, Autism Spectrum Disorder and Asperger's syndrome was conducted to gain an in depth understanding of the symptoms or traits characteristic of each disorder. We identified symptoms that seemed to overlap between all three disorders and those specific to each one. We then developed a scale of these symptoms expressed in layman's terms regarding the following categories: social interactions, cognition, perception, experiencing emotions, and biologically based reactions. Findings of behaviors or symptoms of both disorders in a significant number of families would be indicative of a familial or genetic relationship. Preliminary data seems to support our hypothesis that symptoms of all three disorders exist on a spectrum within families. The recognition of a genotypic or phenotypic familial connection between BPD and Autism Spectrum Disorders could lead to opportunities for early identification of BPD in children at risk who might benefit from interventions effective with Autistic children, thus avoiding development of maladaptive coping behaviors characteristic of BPD. Conversely, presence of a familial association between BPD and Autism Spectrum Disorders might suggest modification of DBT skills for those on the Autism Spectrum.

No. 118

WITHDRAWN

No. 119

Cognitive Flexibility, Social Support, Resilience, and Grit: What Aggravates/Mitigates Burnout in Residents?

Poster Presenter: David R. Williams, M.D.
Co-Author: Tasha Wyatt

SUMMARY:

Burnout is a prevalent problem among medical professionals affecting anywhere from 17% to 75% of individuals. Residents are especially vulnerable due to factors including long work hours, inexperience, and geographical relocation. Burnout as a concept includes aspects of emotional exhaustion, depersonalization, and declining work satisfaction. Studies have consistently found that among residents in American residencies, international medical graduates (IMGs) have lower

levels of burnout than American graduates. A wide range of explanations have been offered including resilience/coping associated with immigration, differing psychological reference points, lower debt burden, and greater social support networks. In recent years the concept of cognitive flexibility has been studied as a mitigating factor in burnout and job performance in a wide range of settings. This concept includes mindful awareness of thoughts and feelings without interfering with the ability to take action consistent with individual values. Cognitive flexibility has not been widely studied as a factor in resident burnout or more specifically among IMGs. Work place programs of Acceptance and Commitment Therapy (ACT) have been used to promote cognitive flexibility among different classes of workers. The 22-item Maslach Burnout Inventory has been used extensively in research concerning burnout. More recently a single item asking subjects to rate levels of burnout by indicating which one of 5 statements most closely corresponds to their self-defined level of burnout has been shown to correlate highly with the full MBI. Measures of cognitive flexibility including the AAQ (acceptance and action questionnaire) have been administered to medical staff and other members of the work force. A measure more suited to occupational settings is the work-related acceptance and action questionnaire (WAAQ). Our study attempts to identify whether a potentially modifiable variable (cognitive flexibility) impacts burnout among residents and whether this explains the differing levels of burnout between American graduates and IMGs. An anonymous online survey will be used to assess levels of burnout and cognitive flexibility. Other secondary measures to be assessed include grit (defined as perseverance and devotion to long term goals) by the Short Grit Scale, social support by the 12-item Interpersonal Support Evaluation List (ISEL), and resilience via the Connor-Davidson Resilience Scale (CD-RISC). The survey respondents will also be invited to participate in a thirty minute one-on-one interview with the sub-I in which they will be asked to share their experience of burnout and what they view as aggravating/mitigating factors. This is a novel aspect as previous studies relating to burnout have not gathered qualitative data from the residents themselves.

No. 120

Treatment of Major Depressive Disorder Using Simple Postural Exercises on a 12-Week Randomized and Controlled Study

Poster Presenter: Martin Furman, M.D.
Co-Authors: Steven Tavarez, Maria Antonella Rago Raed, Mariano Furman, M.D., Gustavo E. Tafet, M.D., Ph.D.

SUMMARY:

BACKGROUND: Affecting more than 300 million people worldwide, depression is one of the major causes of disability and is the second leading cause of overload on health services. Less than 10% of those affected worldwide are treated. Different studies relate posture and balance exercises with the reduction of mild to moderate depression (MDD). Feedback of the muscular and facial skin afferents produces a modulation of neural activity within the central circuits of emotions. The objective of this research is to evaluate the affective and behavioral changes associated with the periodic and systematized performance of postural exercises and oro-facial motility. METHOD: 42 MDD patients (DSM-5) with partial response to treatment with same SSRI dosage for more than 12 weeks, were randomly assigned to receive either postural exercises and SSRI or SSRI only. Participants were evaluated at weeks 0 and 12 for improvement in symptoms using the Beck Depression Inventory (BDI), and 17-Item Hamilton Depression Rating Scale (HDRS-17). The study occurred from january 2017 to april 2017. The postural exercises indicated were to be done 4 to 6 times per day, with more than 2 hours of separation, from Monday to Sunday. 1) Equilibrium exercises: with a flexed lower limb, both knees together, upper limbs elevated to 90° of the thorax, for 15 seconds, resting for 5 seconds and then changing limbs. Repeat with eyes closed the same exercise. 2) Facial expression: Smile using a Pencil placed horizontally between both jaws, holding with teeth. For 1 minute. RESULTS: Patients who received postural exercises had a statistically significant reduction in MDD symptoms as compared to those without the exercises. HDRS-17 response rates (? 50% reduction from baseline) were 86% (18/21) in the Exercises Group, and 28,5% (6/21) in the Non-Exercises Control Group. HDRS-17 remission rates (score ? 7)

were 66,6% (14/21) and 19,47% (4/21), respectively. HDRS-17 scores dropped -63,8% in Exercises Group versus -40,09% in the Control group. The BDI response rate was 71,42% (15/21) in the Exercises group, and 19% (4/21) in the Control Group. BDI remission rates (score ? 9) were 39,10% (8/21), and 19% (4/21), respectively. BDI scores dropped -59,36% in the Exercises Group versus -37,9% in the Control group. CONCLUSIONS: Repetitive Postural Exercises were associated with significant improvement in depressive symptoms and may be a safe, innovative and sustainable intervention in the treatment of MDD.

No. 121

Working Conditions Among Psychiatrists in Argentina: A Cross-Sectional Survey

Poster Presenter: Mariano Furman, M.D.
Co-Authors: Martin Furman, M.D., Maximiliano Cesoni, Mariano Furman, M.D., Viviana Peskin

SUMMARY:

Introduction: The lack of recent socio-demographic and working conditions information specifically among psychiatrists and psychiatrists in training in Argentina does not allow to address potential issues that could have an impact on the work environment and well being of the psychiatrists and consequences in the care they provide to patients. Having a subjective perception of the daily complexities of practicing in a setting with not enough resources is a call to explore and have objective data that could help implement strategies to address those aspects that prevent psychiatrists from providing the appropriate care. There are reports of burnout among these population in Argentina that could be linked to the low income, numerous jobs, gender bias, among others. Methods: Cross sectional application of anonymous digital survey designed by the authors in order to collect both socio-demographic and working condition related information.The following survey assessed the working conditions and income of psychiatrists and psychiatrists in training currently working in Argentina. The 48 item-questionnaire applied was divided in 3 sections:1) Socio-Demographics, 2) Working Conditions 3) Unions, Medical or Academic Association affiliations. Convenience sample. Statistical analysis: Data collected was analyzed using SPSS. For the dichotomous variables qui square and for continuous variables t test. Results: 838 psychiatrists and psychiatrists in training responded. The mean age in the sample was 39.71 (SD 10,3). The mean weekly working hours was 39.47. 39.1% participants were men, 60.9% women. When looking into gender and overall working hours,applying ANOVA we found that men (41.36) work more hours than women (38.26) (p=0.01), also men have a higher income than women (p<0.05), however there is no significant difference between number of jobs and gender. Conclusion: Based on the results that show gender bias regarding income there is a need to create a team to continue exploring different aspects of the working conditions among psychiatrists in Argentina, implement strategies to generate a better working environment for psychiatrists to conduct their work and continue assessing these conditions with surveys, to learn how these conditions change over time. Since addressing these issues will bring wellbeing to the psychiatrist both the care they provide and the research they conduct.

No. 122

Potential Utility of Pharmacogenomics in Older Adults With Poorly Controlled Depression

Poster Presenter: Manuel Cabrera
Co-Author: Sinan Zhu

SUMMARY:

Background Pharmacogenomic testing provides means for medication optimization based on individual genetic profiles. Recent studies demonstrated significant potential of pharmacogenomic testing in improving treatment of major depressive disorder. The impact of pharmacogenomic testing in older adults with poorly controlled depression has not been explored systematically. The goal of this poster is to present results of pharmacogenomic testing in older adults with poorly controlled depression and to discuss its potential impact. Methods Inclusion criteria consisted of confirmed diagnosis of major depressive disorder and score of 19 and higher on Hamilton Depression Rating Scale (HAM-D). Seventeen eligible patients with poorly controlled depression were referred by primary care providers for genetic testing using PGxOne Plus testing kit. PGxOne Plus

testing kit from Admera Health comprehensively screens 50 well-established pharmacogenomic genes in a single, cost-effective test that provides medically actionable and clinically relevant data. Results of testing were forwarded to patient providers within a week from sample collection. Results Mean age of enrolled patients was 70±3 years old, HAM-D: 20±8, 21% were Blacks, 64% were born in U.S., 7% were employed, 43% reported worsening of depression in the last 12 months, 35% had side effects from depression medications, 7% knew what pharmacogenomic testing is. In 88% of study subjects, significant genetic polymorphisms were detected that may affect efficacy of antidepressant medications. These polymorphisms included previously described alleles of CYP2C19, CYP2D6, SLCO1B1, SLC6A4, HTR1A, HTR1A, and GRIK4 that were shown to modulate individual sensitivity to psychotropic medications. Polypharmacy defined as 5 or more prescription medications was documented in 94% of enrolled patient. Significant drug-drug interactions were reported in 70% of these patients which lead to additional drug changes in these patients. Based on the results of pharmacogenomic report, providers changed medication regimen in 53% of the patients with significant pharmacognomic polymprphisms affecting efficacy of anti-depressant drugs. Discussion The majority of older adults with poorly controlled depression were found to have significant pharmacogenomic polymorphisms affecting efficacy of psychotropic medications. Successful uptake of pharmacogenomic-driven depression therapy was shown by primary care providers. Medication therapy was optimized in 53% of patients for whom alleles modulating depression drug efficacy were reported. Randomized controlled trials are warranted in this population to definitively evaluate efficacy of pharmacogenomic testing.

No. 123

Challenges in Implementing Pharmacogenomics-Driven Medication Optimization in the Treatment of Major Depressive Disorder

Poster Presenter: Joseph Finkelstein

SUMMARY:

Background Pharmacogenomic testing is increasingly being used as a promising tool in optimizing medication regimens by identifying genetic biomarkers of personal response to particular drugs. To a large extent, variability in antidepressant efficacy can be explained by genetic variations that affect medication-metabolizing enzymes, drug transporters, and medication targets. Recent reviews demonstrated significant potential of pharmacogenomic testing in improving treatment of major depressive disorder. To evaluate the clinical impact of comprehensive pharmacogenomic testing on the treatment of major depressive disorder, a prospective randomized double-blind study has been carried out. The goal of this poster is to describe challenges barriers in implementing pharmacogenomic testing into routine clinical practice. Methods PGxOne Plus testing kit from Admera Health comprehensively screens 50 well-established pharmacogenomic genes in a single, cost-effective test that provides medically actionable and clinically relevant data. Content analysis of semi-structured qualitative interviews in seven providers was used to identify major barriers in implementing pharmacogenomics in routine clinical care. Results Major categories of similar meanings representing barriers to implementation of pharmacogenomic testing were identified. They included lack of provider knowledge, complexity of pharmacogenomic reports, uncertainty in interpretation of results, lack of clinical evidence on using pharmacogenomic results, lack of support in electronic medical records for storage and representation of pharmacogenomic results, lack of patient education. Potential approaches to address these challenges included development of online CME courses and training tools, introduction of evidence-based clinical pathways and evidence-based consensus guidelines, conduct of randomized controlled trials demonstrating clinical efficacy, development of informatics solutions for storage, representation, and secure exchange of pharmacogenomic data, developing information resources for patients. Conclusion To address barriers in implementation of pharmacogenomics in routine clinical settings, comprehensive steps have to be undertaken that engage and empower both providers and patients.

No. 124

Antipsychotic Polytherapy Is Associated With

Longer Duration of Neuroleptic Malignant Syndrome: A Meta-Analysis of Case Reports and Case Series

Poster Presenter: Daniel Guinart, M.D.
Co-Authors: Jose Manuel Rubio-Lorente, M.D., Fuminari Misawa, M.D., Justin Pereira, John Michael Kane, M.D., Christoph U. Correll, M.D.

SUMMARY:
Background: Neuroleptic Malignant Syndrome (NMS) is a serious adverse reaction to antipsychotics, characterized by muscle rigidity, altered mental status, fever and autonomic dysfunction. NMS is idiosyncratic and rare, but can be life-threatening. Although antipsychotic polytherapy is common in the treatment of schizophrenia, it is unknown whether there are differences in the clinical presentation, severity, treatment and outcome of NMS between antipsychotic monotherapy or polytherapy. **Methods:** A systematic review of Medline, Embase, Cochrane, PsychINFO and CINAHL databases without time restriction and meta-analysis of patient-level data from NMS case reports and case series published in English was performed. Included were cases published until September 2017 of patients aged 18–65 years old with antipsychotic-related NMS. Data search and abstraction were performed and double checked by two independent investigators. The clinical severity of NMS was rated on the Yacoub scale (max=23 symptoms). The clinical characteristics, interventions for and outcomes of NMS were compared in patients treated with one antipsychotic ("monotherapy") versus ≥2 antipsychotics ("polytherapy"). **Results:** Of 710 cases of NMS, 394 (55.5%) occurred during antipsychotic monotherapy and 316 (44.5%) occurred on polytherapy. The two groups did not differ on age, sex, illness duration, physical and psychiatric comorbidities, and psychotropic cotreatment, but more Caucasians and European and U.S. patients were on monotherapy. Groups did not differ on presence and severity of most NMS symptoms as rated on the Yacoub scale. Interventions for NMS or recovery level from NMS were similar across both groups. NMS-related mortality did not differ between groups (9.2% vs 6.6%, p=0.2016). Both duration of NMS (median=1.7 vs 1.4 weeks, p=0.013) and duration of hospitalization (median=5 vs 3 weeks, p=0.006) were significantly longer in the polytherapy group, in which also more patients required intensive care unit treatment (23.4% vs 14.5% vs p=0.002). **Discussion:** Most of the clinical presentation, severity, treatment and outcome-related variables of NMS did not differ between patients receiving antipsychotic polytherapy and those on monotherapy. However, polytherapy was associated with significantly longer duration of NMS, length of hospital stay, and frequency of ICU use, implying a more severe course of illness. Results are limited to case reports, as prospective studies on a low incidence severe adverse event are difficult to conduct. **Conclusion:** Antipsychotic polytherapy seems to be associated with greater severity of NMS, reflected by significantly longer duration of NMS, length of hospital stays, and frequency of ICU. However, polypharmacy did not appear to be associated with significant differences in clinical presentation or worse overall outcomes, including mortality and degree of recovery from NMS.

No. 125

The Effects and Safety of Topiramate or Metformin on Obesity Induced by Antipsychotics in Patients With Mental Disorder: A Randomized Clinical Trial

Poster Presenter: Congjie Wang, M.D.

SUMMARY:
Objective: To explore the effects of concomitant topiramate or metformin on antipsychotic-induced obesity in outpatients with mental disorder. Method: 62 cases of obese outpatients with schizophrenia or affective disorder and with stable clinical conditions were randomly assigned to receive 16-week of concomitant topiramate(n=32) or metformin(n=30) treatment from September,2012 to December, 2016. The mean daily dose of topiramate and metformin was 190.63±57.41mg and 0.67±0.22 after 16-week treatment respectively. The weight, body mass index (BMI), waist-hip ratio and adverse events were measured. Results: 1. Two groups had comparable characteristic features, but there were significant differences in baseline BMI and employment status between two groups ($t=2.19$, $P<0.05$; $\chi^2=9.29$, $P=0.01$). 2. Intention-to-treat analyses (ITT): The missing data were corrected using the last observation carried forward method when ITT analyses. 2.1 Comparison pre and post

treatment: The weight, BMI and waist-hip ratio at each follow-up visit markedly decreased compared with baseline in the topiramate group (all P value<0.001). Only waist-hip ratio at week 4 follow-up significantly decreased compared with baseline (t=2.28, P<0.05) in the metformin group. 2.2 Comparison between two groups: Only weight loss and BMI reduction in the topiramate group were significantly more than that in the metformin group (F=4.20, 8.77, P<0.05, 0.01) at week 4 follow-up. Weight loss, BMI and waist-hip ratio reduction at week 8-16 follow-up in the topiramate group were all remarkably more than that in the metformin group (P<0.05 or 0.001). 3. Completer analyses. 3.1 Comparison pre and post treatment: Weight, BMI and waist-hip ratio at week 4-16 follow-up visit both markedly decreased compared with the baseline in the topiramate group (all P value<0.001). While only waist-hip ratio at week 4 follow-up significantly decreased than that of the baseline (t=2.37, P<0.05) in the metformin group. 3.2 Comparison between two groups: Only BMI reduction in the topiramate group was found significantly more than that in the metformin group at week 4 follow-up(F=6.97, P<0.05). Weight, waist-hip ratio and BMI at week 8 follow-up visit in the topiramate were remarkably lower than that in the metformin group (F=6.04, 4.68 and 14.30, P<0.05 or 0.001). Only BMI reduction at week 12, 16 follow-up in the topiramate group was significantly more than that in the metformin group (Fweek 12, week 16=10.84, 13.22, both P<0.01). 4. Comparison of adverse events: No differences of adverse events were found between two groups, including dizziness and poor appetite, diarrhea in the topiramate group (P>0.05). Conclusions: The results suggested that topiramate may provide a significant reduction in obesity induced by SGAs and present a marked benefits compared with metformin. And it is safety to utilize topiramate as an adjuvant treatment of obesity induced by some SGAs.

No. 126

A Comparison of Negative Symptom Improvement With Paliperidone Palmitate: 1-Month Versus 3-Month Long-Acting Injectables

Poster Presenter: Srihari Gopal
Co-Authors: Maju Mathews, Arun Singh, Jagadish Gogate, Edward Kim, Katalin Pungor

SUMMARY:
Background: Negative symptoms of schizophrenia are key predictors of long-term disability. It is important to understand whether treatment with long-acting injectable (LAI) antipsychotics can improve negative symptom psychopathology. Paliperidone palmitate 3-month formulation (PP3M) provides a sustained release of paliperidone, permitting an extended dosing interval of 4 doses/year in patients with schizophrenia. The efficacy of PP3M as assessed by relapse rate is comparable to the paliperidone palmitate 1-month formulation (PP1M). The purpose of this post-hoc analysis was to compare improvement in negative symptoms in patients treated with PP1M and PP3M. Methods: Data from a randomized, double-blind (DB), parallel-group, multicenter, phase 3 study in patients with schizophrenia were analyzed. Patients aged 18 to 70 yr with schizophrenia (DSM-IV-TR) and a total Positive and Negative Syndrome Scale (PANSS) score of 70-120 at screening were enrolled. After screening (3 wks), patients entered a 17-wk open-label (OL) phase, to receive PP1M (day 1 [150 mg eq. deltoid], day 8 [100 mg eq. deltoid], wks 5, 9 and 13 [50, 75, 100, or 150 mg eq., deltoid/gluteal]) and entered a 48-wk DB phase and randomized (1:1) to receive either PP1M (50, 75, 100, or 150 mg eq., stabilized in OL) or PP3M (175, 263, 350, or 525 mg eq.) in deltoid or gluteal muscle. PANSS total scores with emphasis on 7-item negative subscale scores for PP1M vs PP3M were assessed. Results: Of 1429 enrolled, 1016 randomized to receive PP3M (n=504) or PP1M (n=512) in DB phase. Majority of patients were men and white (both 55%), with mean (SD) age of 38.4 (11.86) yrs. At baseline, the mean (SE) negative subscale total was 23.2 (0.12), indicating a moderate to severe level of negative symptoms. Negative subscale and negative symptoms factor scores showed continuous improvements throughout the OL and DB phases of the study - mean (SD) at OL baseline and DB endpoint for total negative subscale score and symptom factor score were 23.2 (4.60) and 22.3 (4.87), and 15.9 (4.99) and 14.9 (4.81), both R^2:0.16, respectively. The mean (SD) PANSS negative subscale score changes from DB baseline for PP1M vs PP3M were similar over time (mean change from baseline to DB endpoint was -1.4 (3.67), R^2:0.06 vs -1.4 (3.63), R^2:0.05). Conclusion: PP3M and PP1M demonstrated consistent and

similar efficacy in patients with moderate to severe negative symptoms of schizophrenia over the observed timepoints, including impact on patients with predominantly negative symptoms. Longer continuous treatment with PP3M showed greater benefit. This indicates that long-acting therapies are associated with continued improvement in negative symptoms over time. Treatment with LAIs for longer than a year was associated with greatest improvements in negative symptoms. Keywords: negative score, negative symptoms, paliperidone palmitate 3-month formulation, paliperidone palmitate 1-month formulation

No. 127

Switching From Paliperidone to Risperidone: A Common Misassumption (Case Report)

Poster Presenter: Sumaiyah Sadaf, M.B.B.S.
Co-Author: Yassir Osama Mahgoub, M.D.

SUMMARY:

Introduction- Paliperidone was approved by FDA for treatment of schizophrenia and schizoaffective disorder. The non-inferiority of paliperidone vs risperidone in patients with schizophrenia has been well documented. As both paliperidone and risperidone are closely related, there is a common assumption that patients who respond to one are likely to respond to the other and vice versa. Goal- To describe a case report of a patient who responded to Risperidone but not to paliperidone and review literature where the above assumption was found to be inaccurate. Method- Pub Med and Google Scholar search using the keywords, "Risperidone", "Paliperidone". Case report- A 40-year-old male, with past psychiatric history of schizophrenia; medical history of obesity and hyperlipidemia; history of multiple psychiatric hospitalizations for worsening of psychosis due to non-adherence; no history of substance use disorder was admitted for worsening of paranoia, auditory hallucinations and physical aggression in context of medication non- compliance. As he was maintained on risperidone 8mg with good response in the past, he was restarted on risperidone pills. However, he refused increasing the dose beyond 4mg as he had concerns of disabling sedation. Hence he was switched to paliperidone (day 4). Paliperidone was titrated to 12mg with initial mild improvement. Presuming that he will continue to improve, paliperidone palmitate's loading doses of 234mg and 156mg were given on day 6 and day 13 respectively and the pills were discontinued. However, his symptoms worsened. Aripiprazole 5mg was added for augmentation (day 19), titrated up to 15mg with poor effect, thus was discontinued (day 29). After failing the augmentation, he agreed to restarting risperidone 4mg (day 31), titrated to 8mg (day 35) with significant improvement. Sodium Valproate was added for aggression. He received risperidone consta 50mg (day 38) and another 50mg on (day 49) and was discharged on the above combination with a recommendation for sleep disordered breathing evaluation. He was readmitted 6 months later due to non-adherence and was stabilized again on risperidone PO and consta within 3 weeks. Discussion- Studies suggest that 6–12 mg/day paliperidone produces similar efficacy to 4–6 mg/day of oral risperidone. Watanabe et al. (2016) demonstrated that risperidone may be better in some patients than paliperidone. Singh et al. reported a case where the change from risperidone long acting to paliperidone pamoate resulted in a poor clinical outcome, and suggested that the two medications may not be equally efficacious for all individuals Conclusion: • Risperidone and Paliperidone are related but some patients tend to respond to one but not to the other. • Providers should consider switching from risperidone to paliperidone or vice versa when the patients don't respond to one of them, especially in cases were long acting formulation is planned.

No. 128

Independent and Site-Based Ratings of Symptom Severity in Pharmacogenetics Clinical Trials

Poster Presenter: Mark Opler

SUMMARY:

Background: Personalized medicine and pharmacogenomics hold strong promise for psychiatry. Studies in this area require novel approaches to ensure endpoint reliability and validity, reduce the impact of treatment unblinding, and minimize other confounds that reduce signal detection. The current program utilized a combination of novel assessment methods, including remote, independent ratings to evaluate adherence

to inclusion criteria and efficacy in a trial of major depressive disorder (MDD). Methods: The 16-item Quick Inventory of Depression Symptomology (QIDS-C16) and Hamilton Depression Rating Scale-17 (HAMD-17), were used in a 60-site randomized trial of pharmacogenomics in depression (n=1,514). The QIDS-C16 was used at screening and both scales were given at baseline and follow up visits. Baseline QIDS-C16 scores >11 were used as inclusion cutoffs. Site-based raters administered the QIDS-C16, while the HAMD-17 was remotely administered by telephone by a cohort of independent, calibrated clinicians. To evaluate QIDS-C16 score accuracy at screening, the percentage of scores near the inclusion threshold (defined as scores 11-13) was calculated per site. Next, to compare site-administered QIDS-C16 scores were translated into HAMD-17 scores using published guidelines. HAMD-translated QIDS-C16 scores were then subtracted from the independently-rated scores. Results: The overall means (SD) of total scores at baseline were 16.01 (2.9) for QIDS-C16 and 20.57 (4.9) for HAMD-17. The correlations between original and HAMD-17 translated scores were low at baseline ($r = .45$, $p < .0001$) compared to subsequent visit at week 4 ($r = .70$, $p < .0001$), indicating less agreement at baseline. At the site level, percentages of assessments at or near the inclusion threshold ranged from 0-61%, with more than half of the sites having at least 20% of their assessments in the 11-13 range for the QIDS-C16. The mean difference scores also identified sites with positive scores, suggesting inflation of scores at baseline; however, there was little overlap between percentages at the inclusion threshold and positive mean difference score. Conclusions: In this study, sites with high percentages of subjects at or near the inclusion threshold did not show significant evidence of inclusion bias. Differences between site-based and independent, remote raters suggests that some patients may have been differentially rated by the two methodologies, but not in a systematic way when evaluated at the site level. Efforts to identify and remedy data quality issues and bias remain critical, both to help minimize noise and increase signal detection and to help ensure objectivity of results for the next generation of personalized medicine studies.

No. 129

Antidepressant-Induced Sexual Dysfunction Among Fluoxetine, Paroxetine, Venlafaxine, and Mirtazapine in a Naturalistic Study

Poster Presenter: Mohamed Al Breiki

SUMMARY:

Introduction: Antidepressants are effective in relieving depression and restoring functions of depressed patients. However, these agents had been associated with a variable degree of sexual dysfunction. Failure to address this side effects to the patient may lead to non-adherence to the treatment and relapse of depression. In Oman, the data regarding antidepressants' side effect is scarce. Objective : This study aims at measuring the prevalence of sexual dysfunction in psychiatric outpatients treated with fluoxetine, paroxetine ,venlafaxine or mirtazapine. Methods : This is a retrospective cross-sectional study conducted in Sultan Qaboos university hospital,Muscat, Oman. All patients above 18 years of age, attending psychiatric clinic and taking fluoxetine, paroxetiene, venlafaxine or mirtazapine for various indications were invited to participate in the study..A data collection sheet was designed to document the patients' demographic features , psychiatric diagnosis, type, dose and duration of antidepressant treatment. Sexual side effects part of Toronto Side Effect Scale (TSES) was used to assess the presence of sexual dysfunction. Male patients were asked to rate the frequency and severity of erectile dysfunction , premature ejaculation and delayed ejaculation on a Liket scale (1: never ,5: everyday). Both genders were asked to rate the frequency and severity of anorgasmia , decreased libido and increased libido. Results : A total of 73 (Male:32% ,Female : 41%) patients were included in the study. The mean age for the participants was 40 years (SD:13.3) .The number of patients on paroxetine , fluoxetine and mirtazapine was equal (21 patients for each antidepressant). Meanwhile , 10 patients were on venlafaxine.The average duration of the antidepressant use was 3 years. The overall prevalence of sexual dysfunction was 34%.Paroxetine was the most common antidepressant associated with sexual dysfunction (43%) .In contrary, mirtazapine was the lowest among antidepressants to cause sexual dysfunction

(9.5%).Decreased libido was the most frequent reported sexual side effect. Conclusion : Sexual dysfunction is common among patients treated with antidepressants particularly selective serotonin reuptake inhibitors (SSRIs).Addressing this side effects early in treatment can improve compliance to treatment and prevent relapse. Keywords : antidepressants , fluoxetine , paroxetine , mirtazapine , venlafaxine , sexual dysfunction

No. 130

The Trajectory of Estimated Glomerular Filtration Rate Over Time for Patients on Lithium Therapy: A Longitudinal Cohort Linkage Study

Poster Presenter: Nagesh Brahmavar Pai, M.D.
Lead Author: Janaye Fish
Co-Authors: Jay Borchard, Kelly Lambert, Karumathil Murali, Lana Hirth

SUMMARY:
Background: Lithium has been used as the corner stone treatment for Bipolar Affective Disorder, depression and mania over the past 40 years1. It remains today as the first choice maintenance treatment for these conditions. However, research on long term lithium use and renal function has yielded mixed results with evidence suggesting it worsens kidney function over time and other findings indicating there is no relationship. In light of such conflicting results this study aimed to investigate the trajectory of Estimated Glomerular Filtration Rate (eGFR) over time in patients treated with lithium therapy2,3,4. Methods: This longitudinal cohort-based linkage study examined 381 patients on lithium therapy. The cohort was identified as patients having being first dispensed lithium by a major NSW Local Health District (LHD) spanning regional and rural areas from 2005 – 2015. Data obtained from the LHD was linked with pathology test results from Southern IML, a community pathology provider for the LHD. eGFR levels were assessed at each patients first reported dispensing of lithium date (baseline) and then at yearly increments for up to 10 years. The closest eGFR value within a month (30 days) of each time-point was used for analysis. If patients had fewer than 2 time-points of eGFR data they were excluded from analysis. Results: An unconditional linear growth model with random slopes and intercepts was used to examine the trajectory of eGFR over time. The model consisted of 202 patients and assumed an unstructured covariance structure. The effect of time on eGFR was found to be non-significant (ß = 0.07; 95% CI = -0.53 – 0.66; p = 0.807). Additionally, the intraclass correlation coefficient suggested that ~ 75% of the variability of eGFR result is explained between patients. Conclusions: Despite the uncertainty surrounding the prolonged use of lithium and its adverse effects on renal function this study found no significant change in eGFR trajectories over time for patients on lithium treatment.

No. 131

Implementation of a New Sign-Out Method Among Psychiatry Residents

Poster Presenter: Britney Galantino, M.D.
Co-Authors: Juan Romero Gaddi, M.D., Andrew J. Lancia, M.D., Mackenzie Lynn Walker

SUMMARY:
Background: Sign out refers to the mechanism in which patient care and responsibility is transferred from one provider to another. The Accreditation Council for Graduate Medical Education (ACGME) states: “Sponsoring institutions and programs must ensure and monitor effective, structured handover processes to facilitate both continuity of care and patient safety. Programs must ensure that residents are competent in communicating with team members in the handover process.” Other versions of sign out, such as the I-PASS method, exist. However, we felt these had limitations in the psychiatry setting. In accordance with ACGME guidelines, we sought to implement a universally agreed upon sign out method among psychiatry residents at University of Illinois College of Medicine at Peoria (UICOMP) in order to improve satisfaction and compliance. We hypothesized that by implementing a method that incorporates common themes of need according to the residents, we would gain better satisfaction with the sign out procedure and overall compliance. Methods: All psychiatry residents, except those involved in the study, participated for a total of 13 residents. IRB approval was obtained. A focus group was held to identify what residents felt was important to have in an effective sign out. The themes developed from

this group included: accessibility, utility, and efficiency of completion. A new electronic sign out was developed with the assistance of the Information Technology Department to address the above concerns. A second focus group reviewed this new sign out method, which demonstrated overall satisfaction. Surrounding the themes, a cross-sectional electronic survey was administered to assess satisfaction and compliance with the existing sign out. The new sign out tool was then introduced. Six months later, the survey was re-administered to assess satisfaction and compliance with the new method. Results: We found that the new sign out method addressed the themes of need including accessibility, efficiency, and utility of completion. Regarding accessibility of the former sign out, our results indicated that 66% of residents thought that it was easily accessible as a printed copy, 75% electronically, and 83% from home. After implementation, all 3 areas rose to 100% in terms of accessibility. Regarding efficiency, 58% believed the sign out was easy to enter with the former method, compared to 100% with the new method. In addition, the utility improved by implementing a new sign out method. Only 41% of residents believed appropriate decisions could be made based on the information provided with the former method, compared to 100% of residents with the new method. Lastly, overall compliance improved from 65% to 100%. Conclusion: By addressing residents' needs with respect to sign out, we gained satisfaction and compliance. Future studies may include re-assessing satisfaction and compliance in 6 months to ensure sustained improvement.

No. 132

Significant Improvements in Body Fat Percentage and Visceral Fat Are Not Reduced by Antidepressant Medication in an Intense Weight Loss Program

Poster Presenter: Jessica Barnes
Co-Authors: Gerald Dembrowski, Krista Curry

SUMMARY:

Background: Antidepressants are one of the three most commonly used therapeutic drug classes in the United States. According to the most recent National Center for Health Statistics study, ~12% of Americans aged 12 and over reported taking at least one anti-depressant medication in the previous 30 days. Studies also support a bidirectional link between major depressive disorder and obesity. This story becomes more complicated when one considers the growing body of evidence suggesting pharmacologic treatment with antidepressants may increase the risk of obesity. Given the data also show that antidepressant use increases with age, it is critical to understand how these medications may impact weight loss. For the first time, we present data collected over the past 12 months from the 20Lighter Program (T20LP), a 3-phase (9wk) intensive weight reduction program, to assess changes in body composition in participants taking antidepressant medications versus participants without. Methods: Data was analyzed from 614 subjects enrolled in and completing T20LP between June 2016 - June 2017. Overall, 14% (86) of the subjects reported taking at least one antidepressant medication (SSRI, NDRI, or other). T20LP included body composition analysis measured via a Class 2 medical device with Bioelectrical Impedance Analysis (BIA, Tanita Corporation) to monitor participant progress. Endpoints of interest assessed include weight, BMI, body fat %, body water %, and visceral fat rating. Baseline demographic values (age, BMI) are reported as median +/- SD. All outcome data is reported as mean +/- SEM. Appropriate statistical analyses were conducted, and in all cases the statistical significance threshold was $P<0.05$. This study was conducted under an IRB approved protocol. Results: Overall, at baseline the cohort had a median age of 50±9.4, and a Body Mass Index (BMI) of 35.1±6.1. From initial baseline to 6wk, each group (Dep; non-Dep) showed statistically significant and clinically meaningful reductions in % body weight (11.76±0.32; 12.19±0.14), BMI (pts) (4.01±0.12; 4.39±0.06), body fat % (13.53±1.01; 14.68±0.44), % visceral fat (22.38±0.98; 23.34±0.43), and increases in body water % (5.78±0.41; 6.03±0.21). When comparing mean changes between Dep and non-Dep groups we found no statistically significant difference in any outcome. Further we found no statistically significant difference between antidepressant medication class sub-cohorts (SSRI, NDRI, other). Conclusion: Improvements from baseline were statistically and clinically significant for all outcome measures in both Dep and non-Dep groups. Interestingly, while

antidepressants may be linked to weight gain and reduce one's ability to lose weight, our data show subjects currently taking at least one antidepressant achieved improvements in body composition outcomes on par with those not taking medications in T20LP, a 3-phase (9wk) intensive weight reduction program.

No. 133

The Educational Impact of Brief Psychiatric Didactics for Emergency Medicine Residents

Poster Presenter: Stephen V. Marcoux, M.D.
Co-Author: Belinda L. Kelly, M.D.

SUMMARY:

Background: According to recent studies, few Emergency Medicine (EM) residency programs have formal training in managing emergent psychiatric concerns2. In 2014, an estimated 43.6 million adults were diagnosed with a psychiatric illness, roughly 18.1% of the U.S. population. Psychiatric presentations account for approximately one in eight emergency department (ED) visits nationwide3. Per recent literature, improvement in knowledge and management of alcohol related cases in the ED was noted with a formalized educational intervention for EM residents1. Similarly, this quality improvement study evaluated the educational impact of interdisciplinary lectures for EM residents on understanding of triage, treatment, and disposition of psychiatric ED presentations. Methods: A tailored thirty minute psychiatric lecture was delivered during EM resident didactics at the San Antonio Military Medical Center (San Antonio, TX), by a senior Psychiatry resident. The lecture covered appropriate triage of psychiatric complaints in the ED, use of emergent psychiatric medications, and appropriate disposition of psychiatric patient presentations. A three-question pre-lecture survey, post-lecture survey, and 3-month follow-up survey were administered to evaluate the impact of the lecture on EM resident psychiatric knowledge and comfort managing psychiatric presentations. Results: Twenty-Six EM residents completed the pre-and post-lecture survey, and thirteen EM residents and new EM staff physicians (PGY-3 residents at the time of the lecture) completed the 3-month follow-up survey. On the pre-lecture survey, greater than 60% but less than 73% of responders were found to be only 'somewhat comfortable' with psychiatric complaints, emergent psychiatric medication usage, and disposition. Roughly 15% were 'not comfortable' with emergency psychiatric medications and disposition. On the 3-month follow-up survey, 61% of responders noted feeling 'definitely more' comfortable with triaging ED psychiatric cases, with 77% 'definitely more' comfortable with disposition. Forty-six percent of EM residents/new staff felt 'definitely more' comfortable with emergent psychiatric medication compared to only 15% from the pre-lecture. The post-lecture survey, primarily used to gauge the quality of information presented, was noted to have been 'very helpful' (for each lecture component) by >80% of EM residents. Conclusion: The frequency of psychiatric presentations to EDs and the lack of formal psychiatric didactic in EM residency training likely creates discomfort and uncertainty about management of psychiatric cases in EM residents. The overall notable improvement in comfort level after one didactic lecture in ED psychiatric triage, management, and disposition in one sample of EM residents, exemplifies the significant benefit of a regularly integrated brief psychiat

No. 134

Well-Being Through an Innovative Electronic Medical Record Alert: A Two-Year Pre-Post Intervention Analysis of Clozapine Management Errors

Poster Presenter: Marianne T. Jhee, M.D.
Co-Authors: Fawad Taj, M.D., Jennifer Roche, George Jaskiw

SUMMARY:

BACKGROUND: Clozapine is the drug of choice for treatment-resistant schizophrenia. It is associated with serious, potentially fatal side effects like seizure and agranulocytosis, and requires close monitoring. At any change in level of care, there is potential for erroneous management of clozapine due to errors in medication-reconciliation or limitations imposed by restricted prescriptive privileges. This risk is increased if providers are unfamiliar with clozapine. An Automatic High-Risk Drug Electronic Medical Record alert is an innovation which may prevent medication management errors, which affect the

well-being of patients. METHODOLOGY: In March 2015, we instituted an Automatic High-Risk Drug Electronic Medical Record (EMR) alert for clozapine patients. This alert appears on the screen when the EMR is accessed, and it identifies the patient as taking clozapine and gives a protocol for preventing medication errors. We completed a retrospective chart review the data of patients taking clozapine who were admitted to medical or surgical floors at Louis Stokes VA Medical Center between March 2013 and March 2017. Data regarding erroneous discontinuation or disruption of clozapine management during the admission is collected. We will perform pre-post intervention analysis, comparing rates of medication management errors pre- and post- implementation of the High-Risk Drug Electronic Medical Record Alert. We will also analyze for other variables (admitting specialty, level of care, psychiatric vs. medical emergency room, etc.) which could potentially influence medication errors in this patient population. RESULTS/CONCLUSIONS: Data is currently being analyzed to determine the impact, if any, of this innovative Automatic Electronic Medical Record Alert on the well-being of patients receiving clozapine. We hope to identify other variables which may influence medication errors, and improve patient wellbeing.

No. 135

African-American Clergy's Attitude Toward Professional Mental Health Services

Poster Presenter: Ebony Delaiusm Gaffney, M.D., Ph.D., M.B.A.

SUMMARY:

Evaluating the attitude of African American clergy toward parishioners seeking professional mental health services for mental illness has important treatment implications. Religion and spirituality are equally important determinants of mental health and can affect African American clergy's attitudes toward professional care for mental illness. Utilizing the health belief model (HBM), this quantitative study examined the role of theological beliefs, education, and personal experience with mental illness as they correlated with clergy's attitudes toward seeking professional mental illness services. Approximately 98 African American Protestant Clergy in the states of Georgia and South Carolina participated in this study. Data was collected using self-administered surveys via e-mail and mailings using the religious attitude scale (RAS) and the attitude toward seeking professional psychological help scale (ATSPPHS). A multiple linear regression analysis was used to examine the correlation of independent variables. The results of this study indicated that theological beliefs ($p = 0.025$) but not education ($p = 0.084$) or personal experience with mental illness ($p = 0.078$) had a direct effect on the African American clergy attitudes toward parishioners seeking professional mental health services. This research supports the idea that conservative African American pastors' attitudes toward congregants seeking professional mental health services are positive. In this poster, I discuss the study results influence on social change by increasing access through clergy and their pivotal role as the gatekeeper for parishioners who seek help for mental illness.

No. 136

Modern Pilgrimages and Care of the Psychiatry Patient

Poster Presenter: Nery Diaz, D.O.

SUMMARY:

Pilgrimages did not die out with the Middle Ages. Or rather, they almost did, but have staged a remarkable resurgence as a spiritual (although not necessarily religious) practice in the 21st Century. The leading example are pilgrimages to Santiago de Compostela, Spain, which has seen a 176.9 percent increase in pilgrims over the last ten years. Currently, over a quarter of a million pilgrims (by foot, bicycle, horse, or wheelchair) reach Santiago de Compostela every year. Other pilgrimages, such as walks in Nepal or the 88 Japanese Temples of Shikoku, are also popular. The role of a pilgrimage as a journey aimed at seeking a deeper understanding and meaning through nature and spirituality is a useful intervention for patients suffering from the stress of mental disorders. The psychiatrist is in a unique position to offer education and support around the transformative nature of a pilgrimage. Many studies support the positive influence of physical activity in promoting mental health. Among adults in the US population, regular physical activity is associated with lower prevalence of major

depression, panic attacks, social phobia, specific phobia and agoraphobia. Although the underlying mechanisms are not clear, the role of tryptophan, serotonin, and brain derived neurotrophic factor are postulated to be the brain chemicals involved in the positive effect of physical activity. Additionally, exploring spiritual beliefs, and traditions that are culturally relevant is an accepted practice in psychiatric care. Psychiatrists are uniquely qualified to respond to spiritual and faith-based practices and how these may assist the patient with managing symptoms that are complicated by phase-of-life problems and relational issues. Having the psychiatrist acknowledge the benefits of a pilgrimage in the presence of the patient can also demonstrate a spiritual and cultural sensitivity. In situations where the patient is struggling with phase-of-life decisions, a psychiatrist affirming the benefits of a pilgrimage may provide hope and acceptance that can aid in recovery. Research into the therapeutic benefits of pilgrimage for mental illness is needed to identify the benefits and risks of such journeys, with outcome measures and improvements in markers of mental health.

No. 137

Measuring the Health Status Burden of Tardive Dyskinesia

Poster Presenter: Joseph McEvoy
Co-Authors: Benjamin Carroll, Sanjay Gandhi, Stephen Maher, Avery Rizio, Mark Kosinski, Jakob Bjorner

SUMMARY:

Background: Tardive dyskinesia (TD) is an often irreversible movement disorder typically caused by exposure to antipsychotics. TD is characterized by repetitive and involuntary movement of the face, mouth, and tongue. The SF-12v2 Health Survey® (SF-12v2) uses 12 questions to measure functional health and well-being from the patient's perspective, and can be used to provide insight into the health status burden of disorders such as TD. Objective: To examine the burden of TD on health-related quality of life (HRQOL), and to compare it to the burden of psychiatric disorders in the absence of TD. Methods: Adults with clinician-confirmed schizophrenia, bipolar disorder, or major depressive disorder participated in a non-interventional online survey. Half of the participants also had a clinician-confirmed diagnosis of TD. Participants' scores on the eight scales (physical functioning, role physical, bodily pain, general health, vitality, social functioning, role emotional, and mental health) and mental and physical component summaries (MCS, PCS) of the SF-12v2 were compared with age- and gender-matched general population scores using separate analyses of variance. Results: Patients with (n=79) and without (n=90) TD experienced a significant burden on HRQOL across all eight scales and MCS of the SF-12v2 (all $P<0.05$); patients with TD also showed a burden on PCS ($P<0.001$). Patients with TD experienced greater burden than non-TD patients across all scales and both MCS and PCS. Differences in scores between TD patients and the general population ranged from 6 to 16 points, while the difference between non-TD patients and the general population ranged from 2 to 13 points. The differences in burden between TD and non-TD patients represent large effect size differences. The largest effect size difference was observed for PCS, which showed a threefold greater burden for TD patients than for non-TD patients. Conclusions: Overall, patients with psychiatric disorders experience significant health status burden across all eight SF-12v2 scales and MCS, while patients with TD also show a significant burden on the overall measure of physical health (PCS). Results also indicate that the health status burden experienced by patients with TD is greater than that experienced by psychiatric patients without TD, particularly with respect to physical health.

No. 138

Predictors of Tardive Dyskinesia in Psychiatric Patients Taking Concomitant Antipsychotics

Poster Presenter: Benjamin Carroll
Lead Author: Oscar Patterson-Lomba
Co-Author: Rajeev Ayyagari

SUMMARY:

Background: Tardive dyskinesia (TD) is typically caused by exposure to antipsychotics, is often irreversible, and can be debilitating. TD symptoms can increase the social stigma of patients with comorbid psychiatric disorders, negatively impact quality of life, and can potentially increase medical morbidity and mortality. An increased risk of

developing TD has been associated with factors such as older age, female sex, underlying mental illness, and long-term use and higher dose of antipsychotics. The association of TD with the use of typical versus atypical antipsychotics has also been evaluated, with mixed results. To date, predictive models assessing the joint effect of clinical characteristics on TD risk have not been developed and validated in the US population. Objective: To develop a prediction model to identify patient and treatment characteristics associated with the occurrence of TD among patients with psychiatric disorders taking AP medications, using a retrospective database analysis. Methods: Adult patients with schizophrenia, major depressive disorder, or bipolar disorder taking oral antipsychotics with 6 months of data prior to the index date were identified from Medicaid claims from six US states. The index date was defined as the date of the first claim for an antipsychotic drug after a claim for the underlying disorder but before diagnosis of TD. A multivariate Cox prediction model was developed using a cross-validated version of the least absolute shrinkage and selection operator (LASSO) regression method to improve prediction accuracy and interpretability of the model. The predictive performance was assessed in a separate validation set via model discrimination (concordance) and calibration. Results: A total of 189,415 patients were identified: 66,723 with bipolar disorder, 68,573 with depressive disorder, and 54,119 with schizophrenia. The selected prediction model had a clinically meaningful concordance of 70% and was well calibrated (P=0.46 for Hosmer–Lemeshow goodness of fit test). Patient's age at index date (hazard ratio [HR]: 1.03), diagnosis of schizophrenia (HR: 1.73), dosage of antipsychotic at index date (up to 100 mg/day chlorpromazine equivalent; HR: 1.40), and presence of bipolar and related disorders (HR: 1.16) were significantly associated with an increased risk of TD diagnosis. Use of atypical antipsychotics at index date was associated with a modest reduction in the risk of TD (HR=0.94). Conclusions: This study identified a group of factors associated with the development of TD among patients with psychiatric disorders treated with antipsychotics. This may allow physicians to better monitor their patients receiving antipsychotics, allowing for the prompt identification and treatment of TD to help maintain quality of life.

No. 139

Long-Term Improvements in Site-Rated Outcomes With Deutetrabenazine Treatment in Patients With Tardive Dyskinesia

Poster Presenter: Karen Anderson
Co-Authors: David Stamler, Mat Davis, Robert Hauser, L. Jarskog, Joohi Jimenez-Shahed, Rajeev Kumar, Stanislaw Ochudlo, Joseph McEvoy, Hubert Fernandez

SUMMARY:

Background: Tardive dyskinesia (TD) is an often-irreversible movement disorder that may intensify the stigma of patients with psychiatric disorders and worsen quality of life. In two randomized, double-blind, placebo (PBO)-controlled, 12-week trials, ARM-TD and AIM-TD ('parent studies'), deutetrabenazine (DTB) demonstrated statistically significant improvements in centrally read Abnormal Involuntary Movement Scale (AIMS) scores at Week 12 compared with PBO and was generally well tolerated. Objective: To evaluate the long-term efficacy of DTB in an open-label safety study following double-blind treatment using site-rated efficacy measures: AIMS, CGIC, and PGIC, which may be used in real-world clinical practice settings. Methods: Patients with TD who completed the parent studies were eligible to enter this open-label, long-term extension (OLE) after completing the 1-week washout period and final evaluation in the blinded portion of the trial. This extension comprised a 6-week titration period followed by a long-term maintenance phase. Patients began DTB at 12 mg/day, titrating up to a maximum total dose of 48 mg/day based on dyskinesia control and tolerability. Efficacy endpoints included in this analysis are the change in site-rated AIMS score (items 1–7) from parent study baseline, and the proportion of patients who were "Much Improved" or "Very Much Improved" (treatment success) on the Clinical Global Impression of Change (CGIC) and Patient Global Impression of Change (PGIC) from OLE baseline. Results: At the end of the parent studies (Week 12), patients treated with DTB had experienced greater mean (standard error) improvements in site-rated AIMS score (–5.0 [0.40]) than patients given PBO (–3.2 [0.47]). With long-term DTB treatment, both groups experienced improvements in site-rated

AIMS scores (prior DTB, –7.9 [0.62]; prior placebo, –6.6 [0.64]) compared with parent study baseline. Similarly, at the end of the parent studies, a greater proportion of patients treated with DTB had treatment success, on the CGIC (DTB, 51%; PBO, 32%) and the PGIC (DTB, 46%; PBO: 33%); whereas at Week 54 of the OLE study, treatment success on CGIC and PGIC were similar in both groups (prior DTB: 66%; prior PBO: 68%) and (prior DTB: 62%; prior PBO: 62%), respectively. DTB was generally well tolerated. Conclusions: Patients treated with DTB showed improvements in abnormal movements, as measured by site-rated AIMS, CGIC, and PGIC scores, which may be used in real-world clinical practice settings. These results corroborate the previously reported efficacy of DTB as observed in the 12-week, double-blind ARM-TD and AIM-TD trials where central raters were used to evaluate AIMS scores.

No. 140

Long-Term Deutetrabenazine Treatment Response in Tardive Dyskinesia by Concomitant Dopamine-Receptor Antagonists and Baseline Comorbidities

Poster Presenter: Karen Anderson
Co-Authors: David Stamler, Mat Davis, Robert Hauser, L. Jarskog, Joohi Jimenez-Shahed, Rajeev Kumar, Stanislaw Ochudlo, Joseph McEvoy, Hubert Fernandez

SUMMARY:

Background: Tardive dyskinesia (TD) results from exposure to dopamine-receptor antagonists (DRAs), such as typical and atypical antipsychotics. Clinicians commonly manage TD by reducing the dose of or stopping the causative agent; however, this may cause psychiatric relapse and worsen quality of life. In the 12-week ARM-TD and AIM-TD trials, deutetrabenazine (DTB) demonstrated statistically significant improvements in Abnormal Involuntary Movement Scale (AIMS) scores versus placebo (PBO) and was generally well tolerated, regardless of baseline DRA use or comorbidities. Objective: To evaluate the impact of underlying disease and current DRA use on efficacy and safety of long-term therapy of DTB in patients with TD. Methods: Patients with TD who completed ARM-TD or AIM-TD were eligible to enter this open-label, single-arm, long-term extension after completing the 1-week washout period and final evaluation in the blinded portion of the trial. Change in AIMS scores from baseline to Week 54 and patients "Much Improved" or "Very Much Improved" (treatment success) on the Clinical Global Impression of Change (CGIC) and Patient Global Impression of Change (PGIC) at Week 54 were analyzed by baseline psychiatric illness type, including mood disorders (bipolar disorder/depression/other) or psychotic disorders (schizophrenia/schizoaffective disorder), and presence or absence of current DRA use. Results: At Week 54, meaningful improvements from baseline in mean (standard error) AIMS scores were observed for patients with baseline mood disorders (–5.2 [0.93]) and psychotic disorders (–5.0 [0.63]), and in patients currently using DRAs (–4.6 [0.54]) or not using DRAs (–6.4 [1.27]). Most patients with mood disorders (73%) and psychotic disorders (71%) were "Much Improved" or "Very Much Improved" on CGIC at Week 54, similar to patients currently using (71%) or not using (74%) DRAs. The majority of patients with mood disorders (62%) and psychotic disorders (57%), as well as patients currently using (58%) or not using (63%) DRAs, were also "Much Improved" or "Very Much Improved" on PGIC at Week 54. Prior treatment in ARM-TD and AIM-TD did not impact the long-term treatment response. Underlying psychiatric disorder and concomitant DRA use did not impact the occurrence of AEs. The frequency of dose reductions, dose suspensions, and withdrawals due to AEs were low, regardless of baseline psychiatric comorbidities and DRA use. Conclusions: Long-term DTB treatment demonstrated meaningful improvements in abnormal movements in TD patients, which were recognized by clinicians and patients, regardless of underlying psychiatric illness or DRA use. This study was supported by Teva Pharmaceutical Industries, Petach Tikva, Israel.

No. 141

Long-Term Treatment With Deutetrabenazine Improves Quality of Life in Patients With Tardive Dyskinesia as Assessed by a Modified Dystonia Scale

Poster Presenter: Karen Anderson
Co-Authors: David Stamler, Mat Davis, Robert Hauser, L. Jarskog, Joohi Jimenez-Shahed, Rajeev Kumar, Stanislaw Ochudlo, Joseph McEvoy, Hubert Fernandez

SUMMARY:

Background: Tardive dyskinesia (TD) is an often-irreversible disorder caused by exposure to dopamine-receptor antagonists (DRAs), such as antipsychotics. TD is characterized by abnormal movements which can negatively impact quality of life (QoL) for patients already stigmatized by mental illness. The Craniocervical Dystonia Questionnaire (CDQ-24) is a QoL questionnaire developed and validated for use in patients with craniocervical dystonia. Domains in the CDQ-24 include Activities of Daily Living (ADL), Pain, Emotional Well-Being, Social/Family Life, and Stigma. Eleven items of the CDQ-24 were modified to be relevant to TD. In the 12-week AIM-TD study, patients with TD treated with deutetrabenazine 24 mg/day saw improvements in the Pain and Stigma subscales, while patients treated with 36 mg/day saw improvements in ADL, Pain, Social Life, and Stigma. Objective: To assess the long-term effect of deutetrabenazine (DTB) on QoL of patients with TD as measured by the modified CDQ-24 (mCDQ-24). Methods: Patients with TD who completed the ARM-TD or AIM-TD studies were eligible to enter this open-label, single-arm, long-term extension after completing the 1-week washout period and final evaluation in the blinded portion of the trial. A reduction in mCDQ-24 score indicates improvement. Results: At baseline, the mean (standard error [SE]) mCDQ-24 total score was 29.5 (1.10). At Weeks 15, 28, and 41, patients experienced an improvement in mean mCDQ-24 total score from baseline (–5.2 [0.82], –3.3 [1.02], –5.5 [1.46], respectively). At Week 54, the overall mean (SE) change in mCDQ-24 total score from baseline was –4.7 (1.69). Similar to the AIM-TD study, the greatest improvements from baseline to Week 54 were seen in the subscales of stigma (–5.2 [2.34]), ADL (–5.8 [2.31]), and pain (–6.6 [1.99]). Improvements were also seen in emotional well-being (–3.2 [2.23]) and social/family life (–2.9 [1.77]). Regardless of treatment with deutetrabenazine or placebo in the parent studies, these results were not impacted. Conclusions: Long-term DTB treatment was associated with QoL improvements in patients with TD, as measured by overall mCDQ-24 score and all subdomains. These results support and strengthen previous findings in AIM-TD indicating that DTB may improve patients' abilities to perform daily activities and decrease the social stigma and disease burden associated with TD. This study was supported by Teva Pharmaceutical Industries, Petach Tikva, Israel.

No. 142

Aripiprazole Lauroxil NanoCrystal® Dispersion: A Potential One-Day Initiation Regimen for Long-Acting Aripiprazole Lauroxil

Poster Presenter: David Walling
Co-Authors: Marjie Hard, Angela Wehr, Yangchun Du, Peter J. Weiden, Lisa von Moltke

SUMMARY:

Background Aripiprazole lauroxil (AL) is a long-acting injectable antipsychotic indicated for the treatment of schizophrenia. Currently, the first AL dose requires 21 days of oral aripiprazole supplementation. To provide a greater range of options for this critical initiation period, a 1-day initiation regimen has been developed utilizing a nano-crystalline milled dispersion of AL (ALNCD). The smaller nano-particle size enables faster dissolution, which is intended to yield rapid achievement of therapeutic levels of aripiprazole when ALNCD is given with the first AL dose. When starting AL in a hospital setting, a 1-day initiation regimen is an important alternative to assure therapeutic antipsychotic levels without oral medication at the time of discharge. Here, we report the findings of a pharmacokinetic (PK) and safety study evaluating the 1-day initiation regimen for starting long-term AL therapy. Methods This was a blinded, randomized, Phase 1, PK, safety and tolerability study that compared the 1-day initiation regimen with a 21-day oral aripiprazole regimen. The 1-day initiation regimen consisted of a single injection of ALNCD and a single 30 mg dose of oral aripiprazole that, together, was hypothesized to achieve aripiprazole concentrations that are comparable with the 21-day regimen. Patients were randomized 1:1:1:1 to either the 1-day initiation regimen or the 21-day initiation regimen (15 mg/day oral aripiprazole), plus a dose of AL 441 or 882 mg. Results In total, 161 patients were enrolled and 133 patients completed the study. Each 1-day initiation regimen group had comparable aripiprazole exposure to each corresponding 21-day initiation regimen group. Overall, the most common adverse events (≥5.0%) were injection-site pain, headache, increased weight, insomnia, dyspepsia,

and anxiety. In total, 9 akathisia events occurred (4 events in 4 patients and 5 events in 2 patients in the 1-day and 21-day initiation regimen groups, respectively; 8 of these were mild and none led to discontinuation). Conclusions The combination of ALNCD and 30 mg oral aripiprazole (as part of a 1-day initiation regimen with AL) is a well-tolerated, adequate substitute for 21 days of oral aripiprazole. Therefore, ALNCD may offer an alternative AL starting regimen that assures therapeutic levels of antipsychotic coverage throughout the initial 21 days of treatment. The ALNCD 1-day initiation regimen is currently under review by the FDA.

No. 143

Early Psychosis Screening and Education on College Campuses in Central Massachusetts

Poster Presenter: Aekta Malhotra
Co-Authors: Delia Bakeman, Sepehr Aziz

SUMMARY:

Intro The prodromal phase preceding first episode psychosis (average onset age 15-27) is a critical period for intervention and long-term prognosis. Multiple studies have shown that duration of untreated psychosis (DUP) is directly associated with response to treatment, time to remission, and risk of relapse. There are barriers to recognition of early psychosis on college campuses, including lack of education among behavioral health specialists and family members, delay in help-seeking related to negative symptoms, societal and internalized stigma surrounding psychosis, and access to appropriate specialty care. In Worcester, MA, we have developed a program entitled Community Health Improvement Plan-Severe Mental Illness (CHIP-SMI) and in partnership with the MA Department of Public Health, we proposed a specific initiative targeting three local colleges to improve detection and treatment of early psychosis in this population. Methods A standardized demographic questionnaire will be administered to three colleges targeting services related to psychotic disorders on campus, followed by a screening day at each campus using the CAMI (Community Attitude towards the Mentally Ill), the KAST (Knowledge About Schizophrenia Test), and the Prodromal Questionnaire 16 (PHQ-16). Further, a one-hour training will be implemented on each campus for college behavioral health counselors and peer specialists consisting of a slide presentation as well as open discussion. The content of this presentation is based on lectures held by the Massachusetts Psychosis Network for Early Treatment (MAPNET) as well as RAISE (Recovery After Initial Schizophrenia Episode) guidelines from the National Institute of Mental Health. Pre and post questionnaires regarding knowledge around psychosis will be administered. Descriptive statistics and paired t test will be used for data analysis. Results Currently, data has been collected from two college campuses regarding demographics. Preliminary results indicate a lack of screening for psychosis and resultant lack of tracking prevalence of psychotic disorders. One college reported that 13 (of 2301) students had psychotic symptoms in 2017, 10 of whom were subsequently hospitalized, however they did not have formal screening methods for psychosis nor were they actively tracking incidence. Screening days are in the process of IRB approval for January 2018. The one-hour trainings have been scheduled for early spring 2018. The data collection and analysis are expected to be finished before May 2018, and the complete results will be presented during the 2018 APA annual meeting. Conclusion Our initiative is expected to provide, for the first time, the needs assessment data regarding early psychosis detection and intervention on college campus in central MA, and also test the feasibility, acceptability and effectiveness of a brief training session around early psychosis for both college behavioral health counselors and college students.

No. 144

Rehospitalizations in Young Adults With Schizophrenia Treated With Once-Monthly Paliperidone Palmitate or Oral Atypical Antipsychotics

Poster Presenter: Tony B. Amos
Lead Author: Dominic Pilon
Co-Authors: Rhiannon Kamstra, Ameur M. Manceur, Antoine C. El Khoury, Patrick Lefebvre

SUMMARY:

Background: The clinical and economic burden of schizophrenia has been linked to the early onset of disease and its chronic nature. Long-acting injectable (LAI) therapies such as once-monthly paliperidone

palmitate (PP1M) have been associated with a reduction in relapses compared with daily oral atypical antipsychotics (OAAs) in adult patients with schizophrenia in large part due to improved adherence. However, there is a need to better understand the effectiveness of these therapies in young adults with schizophrenia. **Objective:** To compare rehospitalizations in patients with schizophrenia treated with PP1M versus OAA with a focus on the young adults (18 to 35 years) **Methods:** The Premier Health care database (01/2009–12/2016) was used to identify hospitalizations of adults (≥18 years) with schizophrenia treated with PP1M or OAA between 09/2009 and 10/2016 (index hospitalizations). Hospitalizations were not included if the patient was exposed to other LAIs, or was transferred to a psychiatric institution. Baseline characteristics, assessed during each index hospitalization, were compared between groups using standardized differences. Rehospitalizations were assessed at 30, 60, and 90 days after each index hospitalization discharge date in young adults and in all patients. Proportions of index hospitalizations resulting in rehospitalization were reported and compared between groups using odds ratios (ORs) and 95% confidence intervals (CIs) obtained from generalized estimating equations controlling for repeated measures per patient and baseline characteristics. **Results:** A total of 8,578 PP1M and 306,252 OAA index hospitalizations were included in the study. Hospitalized young adults treated with PP1M (N=3,791) were more likely to be seen by a psychiatrist (94.0% vs. 90.0%, standardized difference: 14.7%), and had a longer length of stay (12.5 vs. 8.6 days, standardized difference: 32.9%) compared to hospitalized young adults treated with OAA (N=96,502). Similar observations were made among all hospitalizations. Following their discharge, young adults receiving PP1M during an index hospitalization had a 25 to 27% lower odds of rehospitalization within 30, 60, and 90 days compared to young adults receiving OAAs (30-day: OR [95% CI]=0.73 [0.64–0.84], P<0.001; 60-day: OR [95% CI]=0.73 [0.63–0.84], P<0.001; 90-day: OR [95% CI]=0.75 [0.65–0.87], P<0.001). Similarly, when observing all patients, those receiving PP1M during an index hospitalization had a 19 to 22% lower odds of rehospitalization within 30, 60, and 90 days compared to those receiving OAAs (30-day: OR [95% CI]=0.79 [0.73–0.86], P<0.001; 60-day: OR [95% CI]=0.78 [0.72–0.85], P<0.001; 90-day: OR [95% CI]=0.81 [0.74–0.87], P<0.001). **Conclusion:** Following a hospitalization for schizophrenia, young adults aged 18 to 35 years treated with PP1M experienced fewer hospitalizations than those treated with OAAs. This finding was also observed in other adults hospitalized.

No. 145

How Do Patients With Schizophrenia and Their Families Learn About the Diagnosis?

Poster Presenter: Doron Amsalem

SUMMARY:

Objective: The purposes of the present study were to investigate how patients with schizophrenia and their relatives learn about the diagnosis, their feelings and degree of satisfaction with the process of delivering that information, and to assess whether this process is in accord with the principles followed in general medicine. Methods: Semi-structured interviews were conducted with 16 dyads of recently discharged patients who had a schizophrenia spectrum diagnosis and one of their relatives. We also designed the Delivering Difficult News Satisfaction Questionnaire (DDNSQ) to assess different aspects of the way the diagnosis was perceived. Results: Twenty-six (86%) patients and their relatives reported having first learned about the diagnosis by reading their release form or during an accidental encounter with personnel. Most patients and their family members disagreed with the diagnosis and reported negative feelings about the way in which they learned about it. Only four (14%) patients and relatives understood why medications were prescribed. Conclusions: Relatives who received the diagnosis accidentally (e.g., from the discharge letter) were more dissatisfied with the disclosure process and had poorer adherence with treatment. The standard principles of delivering bad news in medicine were not applied in most cases. Development of empirical-based guidelines for delivering difficult news in psychiatry is needed in order to improve the way of communicating the diagnosis to patients and relatives.

No. 146

Patient Preferences Concerning the Efficacy and

Side Effect Profile of Schizophrenia Medication: A Survey of Patients Living With Schizophrenia

Poster Presenter: Eric D. Achtyes, M.D.
Co-Authors: Adam Simmons, Anna Skabeev, Ying Jiang, Patricia Marcy, Nikki Levy, Peter J. Weiden

SUMMARY:
Background: Patient-reported outcomes and preferences rely on reports of the status of a patient's health condition that comes directly from the patient, without interpretation or qualification by clinicians or investigators. Patient-reported outcomes and preferences have become an accepted approach in drug development. As part of this effort, we assessed the relative importance to patients with schizophrenia of trying a new antipsychotic that might improve symptoms in the context of common antipsychotic side effects, especially weight gain. Information from surveys such as this one can provide pilot guidance what might be acceptable vs. unacceptable tradeoffs when considering new therapies for schizophrenia. **Methods:** We prospectively administered a cross-sectional survey to 250 patients with clinical diagnoses of schizophrenia or schizoaffective disorder, aged 18+ years, from five U.S. outpatient community clinics, regarding the importance of efficacy and side effects on treatment decisions involving medications. Sixty-four percent (N=160) of the patients were male; mean age was 43 years (range: 18–72 years); mean weight was 91kg (range: 49–182kg); and mean body mass index was 30.3kg/m2 (range: 15.3–63.3kg/m2). **Results:** Patients rated both efficacy and side effects as important attributes of medication for schizophrenia treatment, with 88.5% identifying the ability to think more clearly as an important property of their medication. Patients identified efficacy and side effects as important drivers to take their prescribed medicine (endorsed as "very" or "most" important by 94.3% and 84.0% of patients, respectively). Patients identified weight gain, physical restlessness and somnolence as significant side effects of current treatments for schizophrenia ("very" or "most" important by 61.5%, 60.4%, and 58.9%, respectively). When asked about willingness to change antipsychotics, anticipated weight gain had a strong negative influence on willingness to try the new antipsychotic, with 44.9% declining to try a medication that would lead to a weight gain between 3–5kg, and 70.8% declining for anticipated weight gain between 5–9kg. **Conclusion:** Patients living with schizophrenia or schizoaffective disorder are influenced by many factors when considering whether to take their prescribed medication, including efficacy and side effects. It is important for clinicians to assess patient-specific concerns and develop a comprehensive treatment plan to maximize adherence to prescribed therapies.

No. 147
WITHDRAWN

No. 148
Predictive Value of Depression at Baseline in Non-Affective Psychoses on PANSS Positive and Negative Scores and Suicide Risk at One Year of Follow Up

Poster Presenter: Sutapa Basu

SUMMARY:
Background: Depression is seen commonly in the course of Schizophrenia and can occur during any of the phases of the psychotic illness. Studies have shown varying prevalence rates of depression in psychoses ranging between 17% to 83%. We do not have a clear understanding of the ebb and flow of depression in the early phase of psychosis, whether these are predictable and how they relate to the course of psychotic symptoms. It has been noted that most depressive symptoms occur concurrently with the acute psychotic symptoms, and resolve once antipsychotic treatment is implemented and the psychosis remits. It has been suggested that the presence of depressive symptoms in the acute psychotic phase of the illness is a favorable prognostic indicator, given the well-established association between negative symptoms and poor overall outcome. Aims; This study aims to examine 1) Predictive value of Depression at baseline in non-affective psychoses on the severity of PANSS positive and negative symptoms at 1 year of follow up 2) Predictive value of Depression at baseline in non-affective psychoses on suicide risk at 1 year of follow up. Methods: This was a naturalistic retrospective study. A total of 443 consecutive patients under the care of Early Psychosis Intervention Programme in Singapore for the past 2 years and fulfilling one of

the diagnoses of non-affective the psychotic spectrum disorders (brief psychotic disorder, Schizophreniform disorder, schizophrenia, delusional disorder and psychotic disorder, not otherwise specified), were recruited Data relating to duration of untreated psychosis (DUP) and clinical and Sociodemographic characteristics were obtained. Diagnosis was made by the treating psychiatrist using the SCID-1. Positive and Negative Symptom Scale (PANSS), Global Assessment of Functioning Scale (GAFS)–total, symptoms and disability, and Clinical Global Impressions (CGI)–severity of illness were done. PHQ 9 was used for screening of depressive symptoms and to assess the severity of depression and was done at 3, 6 and 12 months. Analysis was conducted using STATA version 10 for windows. The cutoff score of PHQ 10. Result; The mean age of the sample was age of 26.5 years. 51.58% were males, 82.6 % were unmarried, and 36.5% were employed. GAFS (Symptoms) score (SD) at baseline was 42 (12.9) Mean GAFS (Disability) score was 44.8 at baseline, the PANSS positive scores (SD) was 21.9 (5.6), PANSS negative scores (SD) was 15.2(8.5) and PANSS general psychopathology or GPS scores (SD) was 38.2(11.8). The mean DUP (SD) was 14.6 (23.8) months and median was 4 months. At baseline, fewer than 34.98% of patients had depression, and they were significantly more likely (p= 0.012) to have a diagnosis of Schizophrenia and Delusional Disorder rather than Brief Psychotic Disorder and Psychosis NOS. They also had lower PANSS positive score at baseline. (p = 0.004). We found a significant inverse co relation between baseline Depression and PANNS negative symptoms at 1 year.((Beta -1.37, 95% -2.69, - 0.05, p = 0.043) which was independent of age, gender, DUP and effects due to drop-outs. There was no correlation between Depression at baseline and positive PANSS scores. In our sample, we found that patients with Depression at baseline had 2.29 times chances of the risk of suicide at 1 year (OR 2.29. 95% CI 1.25 – 4.22, p = 0.008).These included completed and attempted suicides.

No. 149

Schizophrenia Complicated by Comorbid Alcohol Use Disorder: Symptom Outcomes From a Phase 2 Randomized Controlled Trial

Poster Presenter: Mary F. Brunette, M.D.

Co-Authors: Stephanie O'Malley, Leslie L. Citrome, M.D., M.P.H., David McDonnell, Lauren DiPetrillo, Ying Jiang, Adam Simmons, Bernard Silverman, Alan Ivan Green, M.D.

SUMMARY:

Background: Alcohol use disorder (AUD) is a common and serious comorbidity of schizophrenia, with no effective pharmacologic treatment to date. Treatment barriers have included hesitancy to conduct clinical trials in this high-risk population, lack of sound biologic models with preclinical promise, and methodological challenges in recruitment, retention and outcome assessments. Samidorphan is a μ receptor antagonist that may reduce alcohol craving in this comorbid population. Methods: These results are from a large double-blind study comparing olanzapine monotherapy (OLZ+PBO) with samidorphan as a combination drug, ALKS3831 (flexibly dosed OLZ + fixed dose [10mg] samidorphan). Adults with schizophrenia (DSM-IV-TR) and AUD (DSM 5), who experienced greater than or equal to 10 drinking days and greater than or equal to 2 heavy drinking days (HDDs) in the previous month, and recent disease symptoms exacerbation (less than or equal to 6 months) were screened. After a 6-week lead in, eligible patients were randomized (1:1) to OLZ+PBO or ALKS3831 in a double-blind treatment phase with up to 15 months' follow-up. The primary outcome, event of exacerbation of disease symptoms (EEDS) rate, was estimated by Kaplan–Meier method with log-rank test for treatment comparison. Post hoc analysis included assessments for change in Positive and Negative Syndrome Scale (PANSS) scores and Clinical Global Impression-Severity (CGI-S) by Mixed Model for Repeated Measurements and change in alcohol use (percentage of HDDs and World Health Organization [WHO] drinking level). Results: Of 229 randomized and dosed patients, 58 (49.6%) in the OLZ+PBO arm and 53 (47.3%) in the ALKS3831 arm completed the study (9 months). Although alcohol use improved over the course of follow-up in both arms, there was no benefit of ALKS 3831 over and above OLZ+PBO in the primary outcome of disease exacerbation as measured by EEDS rate (P=0.746). This post-hoc analysis showed improvements in PANSS, CGI-S and alcohol consumption in both arms from randomization to months 9–15. ALKS3831

demonstrated greater improvements in PANSS total score vs OLZ+PBO (Month 9: -6.9 vs -3.3, P=0.043; Month 15: -8.9 vs -3.6, P=0.016) from baseline of 64.7 (SD=7.8). Change in CGI-S scores was also greater in the ALKS3831- vs OLZ+PBO-treated patients (Month 9: -0.5 vs -0.2, P=0.013; Month 15: -0.7 vs -0.4, P=0.065). In contrast, there were no group differences in alcohol behavior: change in percent HDDs was similar in ALKS3831- vs OLZ+PBO-treated patients (Month 9: -21.2% vs -15.0%; Month 15: -16.9% vs -13.2); similar results were reported for WHO drinking risk. Conclusion: Consistent with the primary outcome results, this post-hoc analysis showed no differences between ALKS 3831 and olanzapine monotherapy in alcohol behavior, but revealed a general reduction of alcohol use in both arms. In contrast, there were significant changes in PANSS and CGI that favored the ALKS3831 group. Study sponsored by Alkermes, Inc.

No. 150

Schizophrenia Relapse Comparison Between Three Paliperidone Formulations Differing in Duration of Action: Results From Post Hoc Analysis

Poster Presenter: Maju Mathews
Co-Authors: Srihari Gopal, Arun Singh, Isaac Nuamah, Anne Marie Quinn, Katalin Pungor, Wilson Tan, Bernardo Garcia de Oliveira Soares, Edward Kim

SUMMARY:
Recurrent relapses, functional impairment and reduced treatment responsiveness are common in patients with schizophrenia owing to poor treatment adherence. Longer acting antipsychotic formulations (long-acting injectables, LAIs) can maintain therapeutic plasma levels for longer duration, reducing dosing frequency and delaying time to relapse relative to their shorter acting equivalents. As such, relatively fewer patients experiencing relapse, and longer time to relapse, might be expected in patients on LAIs who discontinue the treatment versus their shorter acting equivalents. However, there is no available evidence to support this hypothesis. In this post hoc analysis, the percentage of patients with schizophrenia experiencing relapse and the time to relapse were compared between the active and placebo arms of three different formulations of paliperidone (oral paliperidone extended release [ER]; paliperidone palmitate once monthly [PP1M] LAI, and paliperidone palmitate three monthly [PP3M] LAI). Data from three similarly designed, randomized, double-blind, placebo-controlled relapse prevention studies in adult patients with schizophrenia (DSM-IV-TR criteria) with similar inclusion/exclusion and relapse criteria were analyzed. Patients stabilized during an open-label stabilization phase with either paliperidone ER, PP1M or PP3M were randomized to receive either placebo (analogous to non-adherent patients in the real-world) or the same active treatment used during stabilization phase (analogous to adherent patients). A total of 922 patients were included in this analysis (paliperidone ER, PP1M or PP3M, 473; placebo, 449). The percentage of patients who experienced relapse was lowest with PP3M versus PP1M and paliperidone ER in both the active treatment group (PP3M, 9% < PP1M, 18% < paliperidone ER, 22%) and placebo group (PP3M, 29% < PP1M, 48% < paliperidone ER, 52%) patients. In the placebo group, the post discontinuation median time to relapse (95% confidence interval) was significantly longer (P<0.0001) with PP3M, 395 days (274 days to not reached) > PP1M, 172 days (134 to 222 days) > paliperidone ER, 58 days (42 to 114 days) but was not estimable in the active treatment group. This analysis demonstrates that patients receiving longer acting formulations of the same antipsychotic are at relatively lower risk of experiencing relapse versus their shorter acting equivalents. Longer acting formulations also substantially delay time to relapse versus their relatively shorter acting equivalents when patients suddenly discontinue their active treatment. The present findings are of significance in schizophrenia patients as fewer and delayed relapse with longer acting formulations of the same antipsychotic over the course of a lifetime of schizophrenia may provide highest protection against grey matter damage and help preserve functioning.

No. 151

Long-Term Effects of Cariprazine in Patients With Negative Symptoms of Schizophrenia: A Post Hoc Analysis of Two 48-Week, Open-Label Studies

Poster Presenter: Joseph Patrick McEvoy, M.D.
Co-Authors: Willie Earley, Hua Guo, Balazs Szatmari, Caroline Hostetler

SUMMARY:
Background: Although negative symptoms are a core feature of schizophrenia that have significant impact on disease burden, effective treatments for this symptom domain are lacking. Cariprazine, a dopamine D3-preferring D3/D2 receptor and serotonin 5-HT1A receptor partial agonist antipsychotic, is approved in the US and Europe for the treatment of adults with schizophrenia and in the US for the treatment of mixed or manic episodes of bipolar I disorder. Cariprazine previously demonstrated efficacy on negative symptoms in a 26-week study of stable patients with predominant negative symptoms (PNS) of schizophrenia and in post hoc analyses of a subset of patients from acute schizophrenia studies who met similar PNS criteria. Here, we investigated the efficacy of cariprazine on negative symptoms after up to 1 year of treatment using data from 2 long-term, open-label studies. Methods: Data were pooled from 2 open-label, 48-week studies (NCT01104792, NCT00839852) of cariprazine (1.5-9 mg/d) in patients with acute schizophrenia; post hoc analyses included data from a subset of patients with moderate-to-severe negative symptoms (ie, Positive and Negative Syndrome Scale factor score for negative symptoms [PANSS-FSNS] >=24 and scores >=4 on at least 2 of the 3 PANSS items N1, N4, and N6) and low levels of positive symptoms (ie, PANSS factor score for positive symptoms <=19). A supportive analysis was also performed using data from the open-label run-in (8 week) and stabilization (12 week) phases of a long-term, cariprazine (3-9 mg/d) relapse-prevention study (NCT01412060). Least squares mean (LSM) changes from baseline in PANSS-FSNS were evaluated using a mixed-effects model for repeated measures. Results: In the pooled 48-week open-label study population, 112/679 (16.5%) patients met negative symptom criteria at baseline. PANSS-FSNS scores decreased over time in this population; the majority of the decrease occurred during the first 8 weeks of treatment (LSM change at week 8: -9.0) and was maintained through the remaining 40 weeks (LSM change at week 48: -11.1). Results were similar in the supportive analysis of the relapse-prevention study. In patients who entered the stabilization phase (n=74), LSM change from baseline to week 20 was -12.1. Conclusions: In this post hoc analysis, long-term, open-label cariprazine treatment resulted in decreased negative symptom factor scores in a subset of patients with moderate-to-severe negative symptoms at baseline. The magnitude and trajectory of these changes were consistent with results from a previous 26-week cariprazine study in patients with PNS. Overall, these results support the efficacy of cariprazine in negative symptoms and suggest that improvements in this domain may persist for up to 1 year.

No. 152

Age-Related Heterogeneity of Treatment Effects in Long-Acting Injectable Medications

Poster Presenter: Natalie Bareis, Ph.D., L.M.S.W., M.S.
Lead Author: Thomas S. Stroup, M.D., M.P.H.
Co-Author: Marvin Stanley Swartz, M.D.

SUMMARY:
Objective: This study investigated the effects of age on the treatment response of individuals assigned to either the long acting injectable (LAI) Haloperidol Decanoate (HD) or Paliperidone Palmitate (PP). Primary analysis of efficacy failure between HD and PP found no overall difference between these treatments and efficacy failure. Method: Data come from A Comparison of Long-Acting Injectable Medications for Schizophrenia (ACLAIMS). 311 participants aged 18-65 years, diagnosed with schizophrenia or schizoaffective disorder, who were at risk of relapse due to medication non-adherence or substance abuse were enrolled. Participants were randomly assigned to double-blinded treatment with HD or PP and followed for up to 2 years. The primary outcome of ACLAIMS was efficacy failure, defined as a psychiatric hospitalization, a need for crisis stabilization, a substantial increase in frequency of outpatient visits, a clinician's decision that oral antipsychotic could not be discontinued within 8 weeks after starting the LAI, or a clinician's decision to discontinue the assigned LAI due to inadequate therapeutic benefit. Survival analysis examined the modification of treatment response by age on the primary outcome of efficacy failure. Mixed effect linear models and analysis of covariance were used to examine this modification on secondary safety outcomes. Results: A significant interaction between age and treatment (p=0.007) on efficacy failure was

found. When stratified by younger (18-45 years of age, N=141) and older (46-65 years of age, N=149) participants, there was a non-significant trend towards a longer time to efficacy failure in PP versus HD in the older group (p=0.196), while younger participants assigned to HD had significantly longer time to efficacy failure than those assigned to PP (p=0.029). Modification of treatment by these age groups found a significant age effect on akathisia (p=0.047), with no difference between these treatment groups in the older participants and an advantage for PP among younger persons. An advantage for HD on serum prolactin levels was larger among both older and younger women (p=0.033). Conclusions: Among older persons, there was no advantage between HD and PP on efficacy failure, however, HD was associated with significantly lower rates of efficacy failure than PP among younger persons. Age effects on adverse effects were mixed. Heterogeneity of the effects of antipsychotic treatments according to patient age warrants further investigation and consideration in clinical practice.

No. 153

Secondary Failure to Clozapine Response in a Rechallenge After Severe Neutropenia

Poster Presenter: Guillermo Joaquín Hönig

SUMMARY:

Main concern associated with clozapine treatment is the eventual presentation of neutropenia and agranulocytocis, which according with current evidence has an incidence of 3 % and 1% respectively. A growing number of reports inform that around 70% of patients rechallenged do not show agranulocytosis while 20% do not show neutropenia. However, as far as we know, persistence of antipsychotic response after the rechallenge has not been informed. We present the case of a patient with resistant schizophrenia responding to clozapine in whom discontinuation of clozapine due to a severe neutropenia, and rechallenged after a long period of time spent with active psychosis, was followed by failure of antipsychotic response. A caucasian male was first admitted to hospital due to an acute psychotic decompensation at 25 years old. From that time on he received typical and atypical antipsychotics without response. At 32 years old treatment with clozapine (600 mg/day) succeeded in inducing response (PANSS score drop down to 60 points) but eight months later, at the time of discharge, severe neutropenia (580 neutrophils/mcl) was observed and clozapine should be discontinued. Treatment with granulocyte colony stimulating factor succeeded in the correction of neutropenia but, according to national normative in Argentine clozapine could not be rechallenged. Then, several antipsychotic treatments (i.e. haloperidol, sertindole, risperidone, quetiapine and olanzapine) administered in appropriate doses and times during 4 years failed to induce response (PANSS scores ranged between 115 and 151 points over that period of time). The electroconvulsive treatment (ECT) was neither authorized by the legal guardian of the patient. Finally, four years later clozapine discontinuation, the addition of ECT to olanzapine was authorized. This approach promoted clinical improvement (PANSS scores ranging between 51 and 93 points) but discontinuations of ECT resulted in symptomatic relapse. Seven years later clozapine discontinuation, rechallenge with clozapine was finally authorized. Although no hematological adverse reaction was observed, antipsychotic response was neither obtained after six months of administration of adequate doses (400 to 900 mg/day). We propose that this case illustrates the fact that persistence of active psychosis, eventually associated with neuroprogression of the disease, could at least in part explain the secondary resistance to clozapine.

No. 154

Early Interventions in a Military First-Episode Psychosis Program

Poster Presenter: Michael Christopher Hann, M.D.
Co-Authors: Evan N. Caporaso, M.D., George Loeffler, Jong H. Yoon, M.D., Adrian Manuel Cuellar, M.D., Lisa Herrington, M.D., Laura Francesca Marrone, M.D.

SUMMARY:

AIM: The Naval Medical Center San Diego's Psychiatric Transition Program (NMCSD PTP) is a specialized first episode psychosis treatment program that delivers coordinated specialty care to military service members with psychotic disorders.

Due to the unique military environment, military service members with first episode psychosis are hypothesized to receive care much earlier relative to their civilian counterparts, resulting in significantly reduced duration of untreated psychosis. This study's aim is to calculate the duration of untreated psychosis for patients enrolled in the Naval Medical Center San Diego's Psychiatric Transition Program from 01JUL2014-31DEC2016. METHODS: Patients included in this study had a diagnosis of schizophreniform disorder (13.04%), schizophrenia (43.48%), schizoaffective disorder (8.70%), other specified schizophreniform disorder (30.43%), or brief psychotic disorder (4.35%) upon discharge from military service and the NMCSD PTP. As established in previous studies, duration of untreated psychosis was defined as the time period from emergence of positive psychotic symptoms to antipsychotic medication initiation. Emergence of positive psychotic symptoms was defined as a Positive and Negative Syndrome Scale (PANSS) symptom score of four or more on positive subscale items 1, 3, 5, or 6 or on general subscale item 9. The interval between first positive psychotic symptoms and neuroleptic administration was measured through retrospective review of the electronic medical record. All available sources of information, including Department of Defense (DoD) data systems and semi-structured personal interviews with military commands, were used to ascertain the length of this time period. A total of 69 subjects in the Naval Medical Center San Diego's Psychiatric Transition Program met inclusion criteria. Mean and median values as well as standard deviations and quantification of skew were calculated for all included subjects.

No. 155

Lumateperone (ITI-007): Results From an Open-Label Safety Switching Study From Standard-of-Care Antipsychotic Therapy in Patients With Schizophrenia

Poster Presenter: Christoph U. Correll, M.D.
Co-Author: Kimberly Vanover

SUMMARY:

Background Lumateperone is a first-in-class agent in development for schizophrenia that acts synergistically through serotonergic, dopaminergic and glutamatergic systems. Lumateperone is a potent 5-HT2A antagonist, a mesolimbic/mesocortical dopamine phosphoprotein modulator (DPPM) with pre-synaptic partial agonist and post-synaptic antagonist activity at D2, a glutamate GluN2B receptor phosphoprotein modulator with D1-dependent enhancement of both NMDA and AMPA currents via the mTOR protein pathway and an inhibitor of serotonin reuptake. Lumateperone demonstrated antipsychotic efficacy in two well-controlled clinical trials was found to be well tolerated with a safety profile similar to placebo in all trials conducted to date. Methods In an open-label safety study, 302 patients with schizophrenia were switched from standard-of-care (SOC) antipsychotic therapy to 6 weeks treatment with lumateperone (ITI-007 60 mg) QPM with no dose titration, then switched back to SOC. The primary objective was to determine the safety of lumateperone, assessed by AEs, body weight, 12-lead ECG, vital signs, clinical laboratory tests, motor assessments, and the Columbia-Suicide Severity Rating Scale. The secondary objectives were to determine the effectiveness of lumateperone as measured by the PANSS, social functioning, and depression as measured by the Calgary Depression Scale for Schizophrenia. Results Lumateperone was generally well-tolerated with a favorable safety profile. There was no drug related serious adverse event. In comparison to treatment with SOC antipsychotics at baseline, mean body weight decreased with lumateperone treatment. Mean levels of cholesterol, triglycerides and prolactin improved with lumateperone treatment and worsened again when patients returned to SOC. The cardiovascular safety of lumateperone was favorable including no QTc interval prolongation. Symptoms of schizophrenia did not worsen with lumateperone treatment, rather improvements were observed in change from baseline of the PANSS total scores. Improvements were also seen in the Positive symptom subscale score, General Psychopathology subscale score, Marder Negative Factor score, and Pro-Social Factor score as well as in the Social Performance Scale (PSP) scale. Greater improvements were observed in subgroups of patients with elevated symptomatology such as those with comorbid symptoms of depression and those with prominent negative symptoms. Discussion Lumateperone represents a novel

approach to the treatment of schizophrenia with a favorable safety profile. The lack of cardiometabolic and motor safety issues presents a safety profile differentiated from SOC antipsychotic therapy. Patients with stable symptoms on other antipsychotics may further improve when switched to lumateperone, with no dose titration needed. These data may warrant further investigation in appropriately controlled trials in patients with promin

No. 156

Multisite RCT of Panax Ginseng Targeting NMDA and Epigenetics Signaling in Negative and Depressive Symptoms in Treatment Resistant Schizophrenia

Poster Presenter: Simon S. Chiu, M.D., Ph.D.
Co-Authors: John Copen, M.D., M.Sc., B.Sc., Mariwan Husni, M.D., Michel Woodbury, M.D.

SUMMARY:

Introduction: Emerging evidence suggest that dysregulation of NMDA-glutamate receptor and epigenetics signaling with restrictive epigenomes, may contribute towards treatment resistant schizophrenia (TRS).Panax Ginseng interacts with glycine- and polyamine-subunit of NMDA receptor, and behaves as a putative histone deacetylase inhibitor (HDAC) in regulating gene transcription. The Objective of RCT study was to evaluate the safety and efficacy of Panax Ginseng in improving negative, depressive and neurocognitive deficits in TRS as defined by the TRRIP working group consensus guidelines. Our primary therapeutic endpoint is response rate of negative symptom : ≥ 30% reduction in SANS (Scale for Assessment of Negative Symptoms) and co-primary endpoint: ≥ 30% reduction in HAM-D: Hamilton Rating Scale for Depression. Method: Study design: multi-site: 8-week randomized placebo-controlled. We recruited DSM-IV-R schizophrenia patients fulfilling the TRS criteria with persistent negative symptoms: SANS score > 24. The subjects were required to maintain on optimal dosages of antipsychotics. We chose standardized Panax Ginseng capsules ,Boehringer-Ingelheim-Pharmaton, Switzerland:Ginsana-115 (GS). In our protocol we used computerized random number method to randomize subjects into three groups: I)Placebo group; 2)100 mg-GS daily group; 3) 200 mg-GS daily group for 8 weeks with a 2-week cross-over period: 56% of the subjects were maintained on clozapine and 17.8% on two atypical antipsychotics. We administered computerized Neuro-cognitive Screening (NCS), Positive and Negative Syndrome Scale:PANSS, SANS, BPRS, HAM-D at baseline and at regular intervals. Safety was monitered with adverse events checklist, Abnormal Involuntary Movement scale:AIMS, vitals and metabolic profile. Results: We randomized 65 subjects (male/female: 51/14) into the three groups. Dropouts (n=22)due to protocol violation occurred mostly during the 2-week placebo lead-in. Completer analysis carried out on the 43 subjects indicated that response rate for Ginseng effect on negative symptoms was 50.0% for 200 mg-GS treatment vs 9.1 % for Placebo (Pearson Chi square : 4.82, $p < 0.03$. NNT (Number needed to Treat): 2.4). Ginseng's response rate for subsyndromal depressive symptoms was 70.0 % for 200 mg-GS treatment vs 18.2 % for placebo (Person Chi square: 5.74, $p < 0.001$). NNT: 1.9. In contrast, GS-100 mg exerted no significant effect on negative or depressive symptoms. Between-subject t-test showed GS-200 mg significantly ($p< 0.05$) reduced Flat Affect subscale of SANS and the total HAMD scale. GS at 100 mg or 200 mg did not alter the cognitive measures of NCS. Panax Ginseng was highly tolerated with no serious adverse events. Conclusion: Panax Ginseng appears to be safe and augments either clozapine or atypical antipsychotics in modifying negative and depressive symptoms. Further RCTs are warranted. Supported by Stanley Medical Research Institute

No. 157

Schizophrenia With Dissociative Episodes Versus Dissociative Identity Disorder: Case Report

Poster Presenter: Navjot Kaur Brainch, M.B.B.S.
Lead Author: Deval Deepak Zaveri, M.D.
Co-Authors: Sanya Virani, M.D., M.P.H., Maria Mirabela Bodic, M.D., Felix E. Torres, M.D.

SUMMARY:

Background: Dissociation in schizophrenia following acute stressful events can easily be confused with dissociative disorders (DDs). We describe here an interesting case of schizophrenia with two long dissociative episodes. Case: 38yo married female

with past psychiatric history of Schizophrenia spectrum illness, who presented with different identity to ED. Her thought process was too disorganized to gather reliable history while family was unreachable. One of her previous providers identified her, which she adamantly refused. During this admission, she considered herself a 12-year-old; insisted on going to school; denied being married or having kids or being of Mexican origin. During her previous hospitalization, patient denied being pregnant even with positive Beta-HCG. During both hospitalizations, she identified herself as her different sister and relayed nonexistent but similar home addresses. She steadfastly held on to her very complex delusional framework even when confronted with contradictory evidence. Her Dissociative Experiences scale (DES) and The Dissociative Disorders Interview Schedule – DSM 5 (DDIS-DSM5) results were more consistent with schizophrenia. She had poor response to Perphenazine, Haloperidol and Aripriprazole along with Fluoxetine while exhibited some improvement on Clozapine. Discussion: The differential diagnosis for DDs include: schizophrenia spectrum disorder, malingering, factitious disorder, complex partial seizure, borderline personality disorder and post-traumatic stress disorder. There is literature supporting significant symptom overlaps between schizophrenia spectrum and DDs. At least 25 to 50% of people diagnosed with DDs have comorbid schizophrenia prompting recent proposals that this represents a new diagnostic subtype. In our case, each long lasting episode of dissociation occurred in context of significant stressful events (unplanned pregnancy, marital discord, husband taking away her kids). The results of DES, DDIS-DSM 5 and lack of fluctuation between distinct personalities pointed more towards post-traumatic dissociative detachment as a manifestation of schizophrenia than DDs. There is a lot of documentation supporting this symptom and diagnostic overlap, but the research in terms of effective treatment options is still vague. There are case reports showing good responses with solitary use of antidepressant, antipsychotics as well as anxiolytics (like lorazepam and Gabapentin). Conclusion: Improvement of symptoms with start of Clozapine shows that dissociation can be presenting feature of psychosis. It appears to be overlooked because of DSM V criteria and separation of schizophrenia from trauma related DDs. In this case, the disorganized behavior with adopting a different identity during dissociative episodes perhaps points towards the close relationship between these two distinct entities of schizophrenia and DDs.

No. 158

Coprophagia—a Rare Psychiatric Symptom and Possible Treatment Options: A Case Report

Poster Presenter: Hardeep Jaspal, M.D.
Co-Authors: Nilesh Dialani, Varun Jain

SUMMARY:
Patient is a 63 year old Hispanic male with a past psychiatric history of schizophrenia and depressive episodes and extensive past medical history including anemia, hypothyroidism, HTN, DM, HLD, asthma, BPH, and GERD, admitted to acute psychiatric unit for agitation and disorganized behavior (scratching his arms and legs violently) along with auditory and visual hallucinations. On the unit, patient was started on Aripiprazole 15mg and was titrated to 30mg slowly. Patient became more disorganized, ran in the hallways naked, had an episode of coprophagia, and persistently scratched his upper and lower extremities which caused multiple large and severe lesions on arms and legs. Dermatology was consulted but their treatment suggestions proved ineffective. Patient had another incident of coprophagia and was placed on a 1:1 observation. Quetiapine 100mg was started and cross titrated with Aripiprazole, which was eventually discontinued. Quetiapine was titrated up to 400mg BID. Patient displayed decreased self-mutilating behavior, but his auditory and visual hallucinations persisted. Patient started reporting depressive symptoms at this time, and was also noted to be responding to internal stimuli. Treatment with Risperidone 0.5mg daily was started and titrated up to 2mg BID. Sertraline 50mg was also initiated and increased to 100mg to treat the depressive symptoms. Patient improved over the next few weeks; his auditory and visual hallucinations subsided and no episodes of self-mutilation or coprophagia were noted. He became more visible in the unit and was eventually discharged. Coprophagia is a rare symptom in schizophrenic patients with only a handful of

reported cases. Distinguishing this symptom as an underlying comorbidity or simply a feature of the patient's psychosis is important for determining the best treatment options. This poster discusses our strategies behind the management and successful treatment of schizophrenia with these unusual symptoms.

No. 159

Translating Trial Endpoints to NNT, NNH, and LHH: A Re-Analysis of the Pivotal Trial of Aripiprazole Lauroxil for the Treatment of Schizophrenia

Poster Presenter: Leslie L. Citrome, M.D., M.P.H.
Co-Authors: Yangchun Du, Peter J. Weiden

SUMMARY:

Objective: Reporting evidence from clinical trials as binary outcomes have the advantage of being clinically intuitive and can be easily expressed in terms of the metric Number Needed to Treat (NNT) for benefits and Number Needed to Harm (NNH) for adverse effects. Tradeoff between benefits and harms can be further quantified using Likelihood to be Helped or Harmed (LHH) – an approach used in this presentation to provide categorical guidance for aripiprazole lauroxil (AL), a long-acting antipsychotic for the treatment of schizophrenia. Methods: Categorical efficacy and tolerability data was extracted from the clinical trial database of the pivotal double-blind, placebo-controlled study of AL in persons with an acute episode of schizophrenia. NNT and NNH values were calculated from primary data from the phase 3 clinical trial with their respective 95% confidence intervals (CI). LHH was then calculated contrasting therapeutic response vs. undesired tolerability outcomes. Results: When pooling two doses of AL (441 mg and 882 mg every 4 weeks), responder rates (30%+ improvement from baseline Positive and Negative Syndrome Scale [PANSS] total score) were 35.3% for AL vs. 18.4% for placebo, yielding a NNT of 6 (95% CI 5–11). Lower thresholds for response (i.e. 20%+ reduction in PANSS total score from baseline to endpoint) evidenced a more robust NNT of 4, and higher thresholds (40%+ or 50%+) produced smaller effect size estimates for NNT of response vs. placebo (10 and 26, respectively). AL responders using the PANSS total score reduction threshold of 30%+ were apparent as early as Day 22, where the NNT vs. placebo was 9 (95% CI 6–19) for the pooled doses of AL (patients received oral aripiprazole 15 mg/day for the first 21 days). NNT was more robust at Days 57 and 85. For the subpopulation of patients who had a baseline PANSS total score >92 (the baseline median), NNT values vs. placebo generally demonstrated a larger effect size compared with the total population at all thresholds and at all time points after Day 8. The NNT estimate was 5 (95% CI 4–8) for pooled doses of AL using the criterion of a PANSS total score reduction of 30%+ at endpoint. Discontinuation rates due to adverse events (AEs) were higher for patients randomized to placebo than for either dose of AL, thus LHH could not be meaningfully calculated using that outcome. Akathisia was the only AE with incidence 5%+ in each AL group and at least twice the rate of placebo (11.6%, 11.5%, and 4.3% of patients in the AL 441 mg group, 882 mg group, and placebo, respectively), producing a NNH of 14 (95% CI 9–33) for AL pooled doses vs. placebo. AL was found to be 2.3 times more likely to result in a therapeutic response than an incident of akathisia. Conclusions: Using the metrics of NNT and NNH, efficacy and safety results were consistent with prior aripiprazole clinical trials for the treatment of patients with an acute exacerbation of schizophrenia. The study was funded by Alkermes, Inc.

No. 160

Decision-Making Capacity for Treatment of Psychotic Patients on Long-Acting Injectable Antipsychotic Treatment

Poster Presenter: Georgios A. Alevizopoulos, M.D.
Lead Author: Maria Nystazaki
Co-Authors: Georgios Karampoutakis, Maria N. K. Karanikola

SUMMARY:

Background: Providing informed, consent requires patients' Decision-Making Capacity for treatment. We evaluated the Decision Making Capacity of outpatients diagnosed with schizophrenia and schizoaffective disorder on treatment with Long Acting Injectable Antipsychotic medication. Methods: This is a retrospective, cross-sectional, correlational study conducted at two Depot Clinics in Athens, Greece. Participants included 65 outpatients diagnosed with schizophrenia and schizoaffective

disorder on treatment with Long Acting Injectable Antipsychotics. Results: Over half of the participants showed poor understanding of the information given regarding their disease and treatment (Understanding subscale), however more than 70% seemed to comprehend the relevance of this information to their medical condition (Appreciation subscale). Moreover, half of the participants reported adequate reasoning ability (Reasoning subscale), whilst patients who gained more than 7% of their body weight scored statistically significantly higher in the subscales of Understanding and Appreciation. Conclusion: Our results suggest that there is a proportion of patients with significantly diminished Decision Making Capacity, hence a full assessment is recommended in order to track them down. Further research is needed to better interpret the association between antipsychotic induced weight gain and Decision Making Capacity in patients suffering from schizophrenia or schizoaffective disorder.

No. 161

Depression as a Key Component in Clinical Staging in Stable Patients With Schizophrenia

Poster Presenter: Ophelia Godin
Co-Author: Pierre Michel Llorca

SUMMARY:

Background During the last two decades, a growing interest for clinical staging has increasingly emerged in psychiatric disease such as Schizophrenia. Most of the studies focused on the early phases of the illness and the transition from prodromal phase to psychosis. To date, no study has applied clinical staging framework as defined by Scott et al (2013) in patients with chronic schizophrenia. Methods Schizophrenia patients from the multicentric FACE-SZ cohort were included. The Structural Clinical Interview for DSM-IV was used to confirm the diagnosis of schizophrenia. Patients were assessed using the Positive And Negative Syndrome Scale and Global Assessment of Functioning scale (GAF). Depression was measured by the Calgary Depression Rating Scale for Schizophrenia. A battery of neuropsychological measures was also performed to investigate cognitive functioning. We performed a cluster analysis using the severity of the illness (defined with the PANSS total score), number of lifetime episode and functioning as discriminating variables. Multivariable analyses of covariance were performed to compare each group regarding socio-demographics factors, clinical characteristics, co-morbidities and cognitive parameters. Results Seven hundred and seventy stable community-dwelling schizophrenia patients were included. Patients were classified into 5 clinical stages, defined as stages 2A (n=89), 2B (n=272), 3A (n=241), 3B (n=112) and 4 (n=56), ranging from favorable functioning and no symptoms to unremitted illness and poor functioning, according to the Scott et al criteria (Scott et al 2013). Grade 2A corresponds to patients with a very low level of symptoms (mean PANSS score 43.9 ± 6.8) and good functioning (mean GAF score 69.3 ± 9.7). In Grade 2B, patients had more symptoms (mean PANSS score 59.4 + 6.5) and a lower functioning (mean GAF score 52.8 ± 7.7) than patients in Grade 2A. Grade 3A corresponds to patients with incomplete remission (mean PANSS score 76.1 ± 6.7) and moderate level of functioning (mean GAF score 46.0 ± 8.0). Grade 3B corresponds to markedly ill patients (PANSS score 91.4 ± 6.3) and poor functioning (mean GAF score 36.7 ± 8.2). The last grade (Grade 4) represents an advanced stage of the illness, corresponding to patients who are severely ill (PANSS score 113.5±11.6) and serious impairment in global functioning (mean GAF score 31.2 ± 8.4). Significant differences were found for socio-demographics, clinical characteristics, comorbidities and cognition between patients in different clinical stages. Specifically, we observe that the worst the grade is, the lower the education level, the higher the depressive symptoms (with characterized depression in Grade 4), the lower the adherence to medication and the lower the cognitive performances (including current and premorbid intellectual functioning, working memory, executive function, learning abilities and semantic memory). Discussion These findings provi

No. 162

Noninvasive Brain Stimulation for Negative Symptoms in Schizophrenia: An Updated Systematic Review and Meta-Analysis

Poster Presenter: Caio Osoegawa
Co-Author: Alisson Trevizol

SUMMARY:

Background: Negative symptoms are particularly relevant when discussing treatment-resistance schizophrenia because not only are they possibly the most significant factor in patients' impaired functional recovery, but also current pharmacological interventions often have little to no effect on negative symptoms. Recently, studies on non-invasive brain stimulation (NIBS) have been performed in order to evaluate the efficacy of the technique on both positive and negative symptoms in schizophrenia. Objective: To assess the efficacy of non-invasive brain stimulation (NIBS) for negative symptoms in schizophrenia in randomized clinical trials (RCTs). Methods: A systematic review in Medline and Cochrane Library databases was performed up to May 31, 2017. The primary outcome was the Hedges' g for continuous scores in a random-effects model. Heterogeneity was evaluated with the I2 and the χ^2 test. Publication bias was assessed using the Begg's funnel plot. Results: 31 studies complied with inclusion criteria and were selected for the quantitative analysis (1272 patients). From the included studies, 23 focused on repetitive transcranial magnetic stimulation (rTMS), 7 studies focused on transcranial direct current stimulation (tDCS) and 1 on transcutaneous auricular vagus nerve stimulation (taVNS), most with small-to-modest sample sizes. We found that both rtMS and tDCS were superior to sham (Hedges' g = 0.19; 95% CI 0.07 – 0.32; and 0.5; 0.02 - 0.97, respectively). The funnel plot and the Eggers test showed that the risk of publication bias was low. In relation to heterogeneity, we found a I2 of 0% (p=0.749) and 51.3% (p=0.055) for rTMS and tDCS, respectively. Meta-regression showed no particular influence of any variable on the results, and there was no difference between protocols of stimulation. Conclusion: Both rTMS and tDCS were superior to sham stimulation for the amelioration of negative symptoms in schizophrenia. We found no considerable heterogeneity or publication bias in our analysis, corroborating to the strength of our findings. Not enough studies on other NIBS techniques, such as taVNS, were found for an isolated analysis. Further RCTs with larger sample sizes are needed to clarify the specific impact of NIBS in negative symptoms in schizophrenia.

No. 163

Quality of Life and Subjective Experience of Cognitive Function Among People With Schizophrenia Spectrum Disorder: A Cross-Sectional Study

Poster Presenter: Shreedhar Paudel, M.D., M.P.H.
Co-Authors: Drew Coman, Madhu Sigdel, Benjamin Gorman, Caitlin Mulligan, Sarah MacLaurin, Oliver Freudenreich, M.D.

SUMMARY:

Background: Impaired cognitive function is an important treatment target for patients with schizophrenia spectrum disorders. The severity of cognitive difficulties can compromise the quality of life (QOL) of affected patients. This study examines the relationship between the subjective experience of cognitive functioning and QOL in patients with schizophrenia spectrum disorders. Methods: In order to improve the quality of health care of patients with serious mental illness (SMI), we implemented an ongoing quality improvement program in our urban mental health center in Boston that regularly assesses a patient's health status with the help of objective and subjective (self-rated) measures. As part of this effort, all patients complete questionnaires on quality of life (the brief version of the World Health Organization Quality Of Life scale,WHOQOL-Brief) and on their perception of cognitive difficulties (Subjective Scale to Investigate Cognition in Schizophrenia, SSTICS). From June 2015 to June 2017, 106 patients with a schizophrenia spectrum disorder completed both questionnaires and were included in the study. Hierarchical regression modeling was employed to evaluate associations between QOL and SSTICS while controlling for potential confounds. Results: Patients ranged in age from 20 to 74 years, and most of them were Caucasian (75.5%) and male (72.6%). Controlling for clinician-rated insight into illness and patient's employment status, self-reported ratings of overall cognitive functioning were negatively associated with both self-reported physical health, Δ R2 = 0.06, F(3, 70) = 4.91, p = 0.004, ß = -0.24, p = 0.03 and with psychological health, Δ R2 = 0.09, F(3, 72) = 2.75, p = 0.049, ß = -0.32, p = 0.009. Further examinations indicated that the memory sub-scores of the SSTICS were negatively associated with physical health, Δ R2 = 0.066, F(3, 70) = 5.28, p = 0.002, ß = -0.27, p = 0.02 and with psychological

health, Δ R2 = 0.092, F(3, 72) = 2.77, p = 0.047, ß = -0.32, p = 0.01. We did not find any significant association between the SSTICS associated subscales (e.g., attention), and other domains of QOL, particularly depression. Conclusion: Patients with schizophrenia spectrum disorders who experienced cognitive impairment reported less physical and psychological well-being. The subjective experiences of cognitive function regardless of objective cognitive status may thus be an important treatment focus if the goal of psychiatric care is improving a patient's quality of life.

No. 164

Patterns and Predictors of Conversion to Bipolar Disorder in 91,587 Individuals Diagnosed With Unipolar Depression

Poster Presenter: Soren Ostergaard

SUMMARY:

Objective: Conversion from unipolar depression (UD) to bipolar disorder (BD) is a clinically important event that should lead to treatment modifications. Unfortunately, recognition of this transition is often delayed. Therefore, the objective of this study was to identify predictors of diagnostic conversion from UD to BD. Method: We conducted a historical prospective cohort study based on 91,587 individuals diagnosed with UD in Danish hospital psychiatry between 1995 and 2016. The association between a series of potential predictors and the conversion from UD to BD during follow-up was estimated by means of Cox regression with death as competing risk. Results: During follow-up, 3,910 individuals with UD developed BD. The cumulative incidence of conversion was slightly higher in females (8.7%, 95%CI: 8.2-9.3) compared to males (7.7%, 95% CI: 7.0-8.4). The strongest predictor of conversion from UD to BD was parental history of BD (adjusted hazard ratio (aHR)=2.64, 95%CI: 2.23-3.12). Other notable predictors included psychotic depression at the index UD diagnosis (aHR=1.71, 95%CI: 1.47-2.00), a prior/concomitant non-affective psychotic disorder (aHR=1.76, 95%CI: 1.53-2.01) and a prior/concomitant alcohol abuse disorder (aHR=1.34, 95% CI: 1.16-1.54). Conclusion: Diagnostic conversion from UD to BD is predicted by psychotic symptomatology, alcohol abuse and parental history of BD.

No. 165

The Validity and Sensitivity of PANSS-6 in Treatment-Resistant Schizophrenia

Poster Presenter: Soren Ostergaard
Co-Authors: Christoph U. Correll, M.D., Leslie Foldager, Per Bech, Ole Mors

SUMMARY:

A six-item version (PANSS-6: P1=Delusions, P2=Conceptual disorganization, P3=Hallucinations, N1=Blunted Affect, N4=Social withdrawal, N6=Lack of spontaneity/flow of conversation) of the 30-item Positive and Negative Syndrome Scale (PANSS-30) has shown promise in the measurement of symptom severity in acutely exacerbated- and chronic schizophrenia, but its validity in treatment-resistant schizophrenia remains unknown. Therefore, we tested the validity and sensitivity of PANSS-6 based on data from the clozapine phase of the Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) study. Specifically, we investigated: I) The scalability of PANSS-6 and PANSS-30 (i.e., whether all items provide unique information regarding syndrome severity); II) The correlation between PANSS-6 and PANSS-30 total scores; III) Whether PANSS-6 could identify symptom remission (Andreasen criteria); and IV) The effect of clozapine compared to the effect of olanzapine, risperidone and quetiapine using the "speed of change" on PANSS-6 and PANSS-30 (change in total score per day) as outcomes. We found that I) only PANSS-6 and not PANSS-30 was scalable; II) The correlation between PANSS-6 and PANSS-30 total scores was high (Spearman coefficient: 0.85), III) PANSS-6 did accurately classify syndrome remission as defined by the Andreasen criteria, and IV) The only antipsychotic that resulted in improvement (speed of change significantly lower than 0 during the first three months of treatment) was clozapine, both when using PANSS-6 (speed of change: -0.072 points/day; 95%CI: -0.121, -0.024) and when using PANSS-30 (speed of change: -0.201 points/day; 95%CI: -0.400, -0.002) as outcome measures. These findings suggest that PANSS-6 validly measures severity, remission and antipsychotic efficacy in treatment-resistant schizophrenia.

No. 166

Comparative Personality Traits Among a Sample of Hospitalized Psychosomatic Adolescents Versus Healthy Controls and Association With Maternal Personality

Poster Presenter: Diana Molina, M.D.
Co-Authors: Paulina Reyes, Laura Ortiz, Guillermo Sarmiento

SUMMARY:

INTRODUCTION. Due to an increasing incidence in psychosomatic disorders in adolescence, it's important to identify risk factors in this population. OBJECTIVE. To describe personality traits of a sample of psychosomatic adolescents in comparison with a group of healthy adolescents and to determine if there was an association with the personality profiles of their mothers METHODS. A consultation-liason team evaluated 14 psychosomatic adolescents during hospitalization at the National Pediatric Hospital from April to November 2017. Severe symptoms included; cyclic vomiting, abdominal pain, non epileptic seizures and motor impairments. Extensive medical investigations excluded physical illness. Psychological evaluation included Minnesota Multiphasic Personality Inventory (MMPI-A). A comparison was made among a sample of 14 psychosomatic adolescents (PA) and a group of 14 healthy adolescents (HA) matched for age and gender with the PA sample.A comparative evaluation of maternal personality profiles was made among the PA mothers and HA mothers using MMPI-2. Association among personality traits of adolescents and mothers was performed. Non parametric statistics were used. RESULTS. Mean age of psychosomatic adolescents was 16.6+1.09. Gender proved to be more frequent on girls 12: (85.7%). Control group was paired for age and gender. Mean age of PA mother's was 43.3 years and HA mothers mean was 40.2 years, with no difference among groups PA showed 3,1,2 (Hs, Hy, D) coding, which corresponds to the hypocondriasis Bradley cluster, with higher MMPI T-scores in Hypochondriasis (p 0.02), Hysteria (p 0.004) and Depression (p 0.02) in comparison with HA. MMPI-2 of PA mothers showed 1,3, profile corresponding to the somatization reaction group, associated to immature, egocentric, selfish, manipulative, dependent, and neurotic personality traits, that may express physical symptoms under stress, with predominant use of repression and denial. PA mothers showed significant higher scores in Hypochondriasis (p0.003), Depression (p 0.02), Hysteria (p 0.004) and Psychastenia (p0.04) and HEA (p0.014) in contrast to control HA mothers. PA mothers exhibited a lower Masculinity-feminity score (p 0.01). Low Mf scale in sample mothers may suggest gender rol unsatisfaction and self-distrusting in comparisson with HA mothers . CONCLUSIONS Psychosomatic symptoms were more frequent in girls than boys in our PA sample. PA showed elevation of the neurotic trait (Hs D and Hy), which has been associated to alexitimia, that also explains, to some extent, the lack of ability to verbalize feelings. PA and their mothers showed 3,1 vs 1,3 codes, which may suggest impairments on adolescent's individuation by maternal modeling of emotional expression through physical symptoms. Further research of the relationship between mother's personality profiles, maternal bonding and separation/individuation challenges of PA is needed. Researchers have no financial relationships to disclose

No. 167

Challenges in Managing a Patient With Functional Neurological Symptom Disorder: Defining Negative Resilience and Its Implications on Recovery Process

Poster Presenter: Monica Parmar, M.B.B.Ch., B.A.O.
Co-Author: Sonia R. Parmar, M.D.

SUMMARY:

A 44-year-old female with a known diagnosis of conversion disorder (CD) presents to outpatient clinic. Initial symptomatology of the patient's presentation began in 2012 with generalized weakness, followed by transient collapsing episodes and bilateral lower limb paralysis. Extensive work-up from endocrinology, cardiology and neurology services was completed. A diagnosis of CD was made by a neurologist without explanation of her symptoms and was told it was functional. After psychiatric referral, she was prescribed sertraline, began cognitive behavioural therapy (CBT) and attempted physiotherapy without completion. She self-discontinued medication due to intolerable side effects. Currently, she has bilateral lower limb paralysis with episodic improvement. She remains mostly dependent on a wheelchair for mobility. On

mental status exam (MSE), her intellectual insight was adequate. However she exhibited poor emotional insight into her illness. The patient currently feels she has improved significantly and is confident that she will reach full remission soon. Such cases bring to light the challenges faced during the management of conversion disorder. Typically, patients with CD frequently experience la belle indifference and do not adhere to medication or physiotherapy interventions long term. This may occur when a patient denies acknowledging the precipitating and perpetuating factors that aggravate symptoms. However in this particular case, this patient exhibits negative resilience. Negative resilience occurs when an individual develops a misguided belief in being resilient and thereby acts accordingly, so as to appear more resilient than reality would suggest. In this case, the patient feels determined to reach remission despite discontinuation from physiotherapy and CBT sessions. Inevitably, the implications of negative resilience can result in adverse outcomes, prolonged recovery and consequently increased vulnerability, such as this patient who remains fully dependent on wheelchair for mobility. , When an individual is determined to achieve resolution with inadequate active effort or necessary changes to reach resolution, but rather continues to believe he or she is resilient, this can become challenging as it impedes the recovery process and reduces insight within the individual. This poster will discuss the implications of negative resilience as well as the responsibility of recovery in conversion disorder.

No. 168

Screening With the Korean Version of the Mood Disorder Questionnaire for Bipolar Disorders in Adolescents: Korean Validity and Reliability Study

Poster Presenter: Sehoon Shim
Co-Authors: Jung Han Yong, SangWoo Han, Jongchul Yang, M.D., Ph.D., EunJee Kim, Doohyun Pak, Yungseo Ryu

SUMMARY:
Aims This study aimed to evaluate the validity and reliability of a Korean version of the Mood Disorder Questionnaire-Adolescent Version (K-MDQ-A) as a screening instrument for bipolar disorders in adolescents. Methods 102 adolescents with bipolar disorders and their parents were recruited from November 2014 to November 2016 at the outpatient and inpatient facilities of 7 training hospitals. 106 controls were recruited from each middle school in 2 cities of south Korea. The parent version of the original MDQ-A was translated into Korean. The parents of all participants completed the K-MDQ-A. The diagnoses of bipolar disorders were determined based on the Korean version of K-SADS-PL. The test-retest reliability with a 10-month interval was investigated in 33 bipolar adolescents. Results K-MDQ-A yielded a sensitivity of 0.90 and a specificity of 0.92 when using a cut-off score of endorsement of 5 items, indicating that symptoms occurred in the same time period and caused moderate or serious problems. The internal consistency of the K-MDQ-A was good. The correlations between each item and the total score ranged from 0.40 to 0.76 and were all statistically significant. Factor analysis revealed 3 factors that explained 61.25% of the total variance. The mean total score was significantly higher in bipolar adolescents (7.29) than in controls (1.32). The Pearson correlation coefficient for the total test-retest score was 0.59($P < .001$). Conclusions The K-MDQ-A completed by parents showed the excellent validity and reliability and may be a useful screening tool for adolescents with bipolar disorders attending in- and outpatient psychiatric clinics. Key words: Adolescent; Bipolar; Mood Disorder Questionnaire; Reliability and validity; Screening

No. 169

Subclinical Hypothyroidism and Incident Depression in Young and Middle Age Adults

Poster Presenter: Sehoon Shim
Co-Authors: Ji Sun Kim, Jung Han Yong, SangWoo Han, Jongchul Yang, M.D., Ph.D., EunJee Kim, Yungseo Ryu, Doohyun Pak

SUMMARY:
Background: The role of subclinical hypothyroidism in the development of depression remains controversial. We examined the prospective association between subclinical hypothyroidism and incident depressive symptoms. Methods: We conducted a prospective cohort study in 220,545 middle age adults without depression who underwent at least two comprehensive health exams between January 1, 2011 and December 31,

2014. Thyroid-stimulating hormone (TSH), free triiodothyronine (FT3) and freethyroxin (FT4) levels were measured by an electrochemiluminescent immunoassay. The study outcome was incident depressive symptom defined as a CES-D score over 16. Results: During a median follow-up of 2 years, incident depressive symptoms occurred in 7,323 participants. The multivariable-adjusted hazard ratio (HR) for incident comparing subclinical hypothyroid to euthyroid participants was 0.97(0.87 to 1.09<). Similarly, among euthyroid participants (n = 87,822), there was no apparent association between thyroid hormone levels and increased risk of incident depressive symptoms. Discussion:There was no apparent association between subclinical hypothyroidism and incident depressive symptoms in a large prospective cohort of middle-aged men and women.

No. 170

The Normalization of Brain 18F-Fluorodeoxy-D-Glucose Positron Emission Tomography Hypometabolism Following Electroconvulsive Therapy in a 55-Year-Old

Poster Presenter: Sehoon Shim
Co-Authors: Jung Han Yong, SangWoo Han, Jongchul Yang, M.D., Ph.D., EunJee Kim, Doohyun Pak, Yungseo Ryu

SUMMARY:
Major depressive disorder, especially in later life, has heterogeneous clinical characteristics and treatment responses. Symptomatically, psychomotor retardation, lack of energy, and apathy tends to be more common in people with late-onset depression (LOD). Despite recent advances in psychopharmacologic treatments, 20% to 30% of patients with mood disorders experience inadequate responses to medication, often resulting in a trial of electroconvulsive therapy (ECT). However, the therapeutic mechanism of ECT is still unclear. By using 18F-fluorodeoxy-D-glucose positron emission tomography-computed tomography (18F-FDG PET/CT), we can obtain the status of brain metabolism in patients with neuropsychiatric disorders and changes during psychiatric treatment course. The object of this case report is evaluating the effect of ECT on brain metabolism in treatment-refractory LOD by PET/CT and understanding the mode of action of ECT. In this case report, we presented a 55-year-old female patient who suffered psychotic depression that was resistant to pharmacological treatment. Several antidepressants and atypical antipsychotics were applied but there was no improvement in her symptoms. The patient presented not only depressed mood and behaviors but also deficit in cognitive functions. We found decreased diffuse cerebral metabolism in her brain 18F-FDG PET/CT image. ECT resulted in amelioration of the patients' symptoms and another brain PET imaging 7 weeks after the last ECT course showed that her brain metabolism was normalized. KEY WORDS: Electroconvulsive therapy; Depression; Fluorodeoxyglucose F18; Positron emission tomography.

No. 171

Efficacy and Utility of Transcranial Magnetic Stimulation in Treatment Resistant Depression and Anxiety in the Outpatient Setting

Poster Presenter: Jerett Y. Watnick, D.O.

SUMMARY:
Introductory: Transcranial magnetic stimulation has been shown to be a non-invasive, effective treatment modality for patients struggling with treatment resistant depression. Reduced activity in the left dorsolateral prefrontal cortex has been associated with affective disorders in physiological studies. Methods: 85 patients who met criteria under the DSM-IV and DSM-V for Major Depressive Disorder received high frequency NeuroStar® TMS over the LDLPFC from 2011-2017 in the UF Health Center for Psychiatry and Addiction Medicine in Vero Beach, FL. 30 treatments were administered over a course of 6 weeks. Rating scales were administered weekly throughout the 6 week course of treatment. The first 54 patients were administered HAMD rating scales. The latter 31 patients were assessed for depression using the PHQ-9. 26 of these 31 patients were additionally given a GAD-7 rating scale weekly throughout treatment. Response rates were calculated based upon a minimum of 50% reduction in rating scale score compared to baseline for HAMD, PHQ-9 and GAD-7. Remission rates were determined by a HAMD score ? 7, PHQ-9 score ? 5, and GAD-7 score ? 5. Results: The study population (n=85) consisted of 47 females (55%) and 38 males

(45%). 55 of the 85 patients (65%) treated with TMS showed a 50% improvement in HAMD and PHQ-9 score throughout the course of treatment. For those assessed using HAMD (n=54) rating scale, the baseline score ranged from 8-37. 30 of the 54 (55.6%) successfully completed 6 weeks of treatment (for a total of 30 treatments). Of these 30 individuals, 14 (47%) entered remission by end of 6 week treatment. The mean baseline HAMD score was 19.9 (± 6.5) and improved to 8.4 (± 5.26) in those who completed 6 weeks of treatment. For the remaining 31 individuals assessed using PHQ-9, 18 of 31 individuals (58.1%) completed 6 weeks of treatment. 10 of those 18 (56%) individuals who completed treatment had entered remission by the end of treatment. The mean baseline PHQ-9 score was 17.4 (± 6.1) improving to 6.8 (± 6.0) by week 6. For those who completed GAD-7 rating scales during the course of treatment, the average baseline score was 13.3 (± 5.0) and improved to an average of 7.9 (± 5.6) at 6 weeks of treatment. 8 of the 17 (47.1%) patients who completed GAD-7 scales through 6 weeks of treatment had reached remission in regards to their anxiety. 7 of the 26 (27%) patients assessed using GAD-7 scores showed a response indicative of a 50% GAD-7 improvement from baseline. Discussion: TMS therapy has been well studied and proven to be an effective treatment for depression and affective disorders. This study yielded a significant result in regards to improvement of depression and anxiety symptoms throughout the course of TMS treatment. Treatment is currently FDA approved solely for the diagnosis of treatment resistant depression. Future studies are highly indicated for further evaluation of anxious features in individuals with a diagnosis of depression.

No. 172

Electroconvulsive Therapy and Risk of Dementia in a Cohort of 168,015 Danish Patients With Affective Disorders

Poster Presenter: Martin Balslev Jørgensen
Co-Authors: Merete Osler, Maarten Rozing

SUMMARY:

Introduction: Electroconvulsive therapy (ECT) is the most effective treatment method for severe episodes of mood disorders, but memory loss is a common neurological side effect. While most cognitive deficits resolve within weeks after treatment, ongoing discussions exist regarding potential long-term adverse cognitive outcomes. Methods: In this register-based cohort study we examined the relationship between Electroconvulsive Therapy (ECT) and incident dementia in patients with affective disorders. All individuals in Denmark with a first-time hospitalization with an affective disorder from January 2005 through December 2015 (n=168 015) were identified in the Danish National Patient Registry and followed for incident epilepsy from January 2005 until November 2016. Incidence of dementia (defined by hospital discharge diagnoses or acetylcholinesterase inhibitor use followed from January 2005 through October 2016) in patients treated with ECT or not was examined using Cox regression analyses with multiple adjustments and propensity matching on sociodemographic and clinical variables. Treatment with ECT was defined at the time of first registration. The influence of premorbid cognitive ability was examined in a subsample of 14 320 men. Results A total of 5901 (3.5%) patients had at least one ECT and 5204 (3.1%) patients developed dementia during a mean follow-up of 5 years. Among patients aged 70 years and above, ECT was associated with a decreased risk of dementia (hazard ratio, 0.68; 95%CI, 0.58-0.80), but in the propensity matched sample the HR was attenuated (hazard ratio, 0.77; 95%CI, 0.63-1.00;p=0.06). The subdistribution hazard ratio suggested that the above estimates may be influenced by the presence of competing mortality risk. Among patients below 70 the crude HRs were above 1 but insignificant (hazard ratioage <50,1.51; 95%CI 0.67-3.46 and hazard ratioage 50-69,1.15; 95%CI, 0.91-1.47). Conclusion ECT was not associated with a risk of incident dementia in patients with affective disorders after correcting for potential influence of patient selection or competing mortality risks.

No. 173

A Case of Catatonia in a Patient With Charge Syndrome Successfully Treated With ECT

Poster Presenter: Nathalie Boulos, M.D.

SUMMARY:

DS, a 19 year old male with Charge Syndrome, presented with severe catatonia refractory to Risperidone and Lorazepam. After the failure of these medications to alleviate his catatonia, the decision was made to use ECT to augment medication. Since beginning ECT nearly two months ago, his catatonia has resolved and ultimately raises an important question: Can electroconvulsive therapy effectively treat catatonia in patients with genetic syndromes? After a thorough review of the literature, it appears this is the first report of the use of ECT to treat catatonia in a patient with CHARGE syndrome.

No. 174

Somatic Symptom and Related Disorders: Treatment and Considerations for Real and Imagined Symptoms

Poster Presenter: Alisa Olmsted
Co-Author: Anand Pandurangi

SUMMARY:

Background Somatic symptom and related disorders present as a heterogeneous mix of pathologies with widely overlapping symptomology and weak evidence of treatment efficacy. The DSM-5 reflects an evolving understanding of pathophysiology; the category now exists as somatic symptom, illness anxiety, factitious, and functional neurological disorder (FND). All others are grouped into general categories notably a new diagnosis of psychological factors affecting other medical conditions. Despite changes, the Cochrane Review labeled evidence for pharmacological treatment of somatic symptom disorders (SSD) as low to very low quality, noting an exclusion of medical functional disorders (MFD) in the analysis may have had a deleterious effect. It is widely understood that there is significant overlap between SSD and MFD with high rates of co-occurrence and shared risk factors such as a history of childhood maltreatment. Previous studies have proposed that the diagnosis of MFD are an unintended consequence of specialization rather than organic cause. Others note the separation between MFD and SSD are the result of a dated view of mind-body dualism. Recently, a randomized double blinded placebo controlled trial (Fink 2017) demonstrated value in low dose imipramine in treating SSD while including MFD and excluding other psychiatric comorbidities suggesting SSD and MFD may lie along a continuum. To explore this relationship further, we examined the existing literature on the pathophysiology of SSD. Methods A systematic literature review was performed on Pubmed, using the key terms “somatoform disorders,” “psychosomatic disorders,” “medically unexplained physical symptoms,” “medically unexplained symptoms,” “functional,” “spectrum,” and “pathophysiology” or “pathophysiologic.” Using these terms, a total of 829 studies resulted. Abstracts were reviewed and results were narrowed to a total of 104 pertinent to this study. Of these, 67 studies were excluded: pediatric 4, reviews 38 and beyond date range (2007-present) 25. Of the remaining 37 studies, there were 24 fMRI studies examining FND. Others represented a heterogeneous mix examining volumetric assessment, reaction time, gastric emptying, vagal response, biological markers, genotyping, and TMS. Results Studies of FND via fMRI indicated localization in a variety of areas including but not limited to somatosensory, anterior cingulate, prefrontal, insular, medial prefrontal, posterior cingulate and posterior parietal cortices, thalamic nuclei, and default mode network. The remainder did not indicate a clear or specific etiology of disease. Conclusion Our review indicates SSD are heterogeneous and best understood along various dimensions such as neurophysiological, phenomenological, psychodynamic, behavioral, and social. SSD and MFD are on a continuum, rather than dichotomous. Therapies should target the multiple dimensions rather than as a category.

No. 175

Seizure Threshold and Its Influencing Factors in Electroconvulsive Therapy Among Thai Psychiatric Patients

Poster Presenter: Pichai Ittasakul, M.D.
Co-Authors: Apichaya Likitnukul, Umporn Pitidhammabhorn, Punjaporn Waleeprakhon

SUMMARY:

Objectives: To investigate seizure threshold (ST) in Thai psychiatric patients who were treated with electroconvulsive therapy (ECT) using the dose titration method and examine the factors influencing ST. The ST determined by dose titration method was

compared to ST determined by the age-based method. Methods: Initial ST of 90 patients were determined at the first ECT session by dose titration method. The correlation of ST to the demographic and clinical variables was analyzed by multiple linear regression. ST was calculated by age of the patients and then compared to initial ST determined by dose titration method. Results: For all subjects, mean±SD (median) ST was 110.1±96.3 (80), range 19-576 mC. The ST was significantly higher in male, subjects who received antipsychotics, and bilateral electrode placement. The ST was significantly lower in subjects who received antidepressants, and benzodiazepines. There was no statistical difference in ST among the subjects who received anticonvulsant, anticholinergic drug, subjects who had history of previous ECT, and subjects who received different anesthetic agents. Predictors of initial ST were sex, age, anticholinergic drug, and electrode placement. The mean±SD (median) ST determined by half-age and age method were 137.2±44.4 (138.1) mC, and 274.4±88.9 (276.2) mC, respectively. By the half-age method, 65.6% of subjects and by age-method, 91.1% of subjects would have seized at first stimulation. Conclusions: ST in Thai psychiatric patients was varied. Sex, age, anticholinergic drug, and electrode placement were strongly influencing ST. However, the correlation of BMI, concurrent psychotropic medications and history of previous ECT and ST still be controversial. Initial ST determined by age-based method was higher than ST determined by dose titration method.

No. 176

A Cognitive Reappraisal Intervention Versus Supportive Therapy for Suicide Prevention for Hospitalized Middle-Aged and Older Adults

Poster Presenter: Dimitris Kiosses, Ph.D.
Co-Author: Elizabeth Arslanoglou

SUMMARY:

Background: Among adults aged 50 years and older, suicide rates increased from 13.9 to 18.4/100,000 and suicide deaths almost doubled from 2000 to 2015. Patients hospitalized for suicidality (i.e. suicidal ideation or suicide attempt) are at high suicide risk during the early post-discharge period, especially within the first 3-months after discharge. This presentation will describe preliminary data of suicidal ideation and depression outcomes of two interventions for middle-aged and older adults (50-90 years old) who have been discharged after a suicide-related hospitalization. The two interventions, Cognitive Reappraisal Intervention for Suicide Prevention (CRISP) and Supportive Therapy (ST), were administered the first 3 months post-discharge. Methods: As part of an ongoing NIMH-funded study (R61 MH110542) and a study funded by the American Foundation for Suicide Prevention, 34 middle-aged and older adults were recruited from the inpatient units of New York Presbyterian Hospital. 21 participants received CRISP and 13 matched participants received ST. Inclusion criteria were: 50 years or older, any diagnosis of depression or anxiety disorders, and recent hospitalization for active suicidal ideation or suicide attempt [Columbia-Suicide Severity Rating Scale (CSSRS) >3 at admission]. CRISP aims to improve cognitive reappraisal ability (i.e. ability to modify the individual's appraisal of a situation, emotional state, or event to alter its emotional significance) to reduce suicide risk. ST is a non-specific psychotherapeutic intervention that focuses on fostering empathy and providing a supportive environment to the patient. Results: The mean age and years of education of the sample were 61 and 13.1, respectively. There were 25% African-Americans, 75% Caucasian, and 13% Hispanics. 63% were females and 37% were males. CRISP participants had significantly lower severity of suicidal ideation by 12 weeks of treatment than ST participants (CRISP: Mean CSSRS=0.21, StD=0.41; ST: Mean CSSRS=1.37, StD=1.30, Mann-Whitney Wilcoxon=2.48, p=0.01). Furthermore, a smaller proportion of CRISP participants had suicidal ideation by the end of treatment than of ST participants (62.5% vs. 21%, Chi-square=4.35, p=0.03). Finally, CRISP participants had significantly lower rates of depression relapse by 12 weeks of treatment than ST participants (9.5 vs. 46.2%; Fisher's Exact p= 0.03). Conclusion: CRISP participants had significantly lower suicidal ideation and depression relapse rates than ST participants by 12 weeks of post-discharge treatment in a sample of middle-aged and older adults hospitalized for suicidality. CRISP focuses on improving cognitive reappraisal ability to reduce suicide risk. Suicide rates in this population are alarmingly high and a

psychosocial intervention for this population is greatly needed.

No. 177

Detonating "Factors" and Prevalence of Suicidal Behavior in Adolescents of the Caribbean, Dominican Republic

Poster Presenter: Stephani Massiel Alvarez Valerio

SUMMARY:

Background: Suicidal behavior in many countries is still a taboo subject. This study presents the reality of a Caribbean country, Dominican Republic, and shows us that the rate of suicidal behavior can no longer be ignored. That this is a real health issue that must be heard and addressed. This study analyzed the factors associated with suicidal behavior in young people aged 14-19 years and the prevalence of such behavior. Method: The study was descriptive-cross-sectional, the information was collected through a self-report survey containing several scales: Plutchik Suicide Risk Scale, Beck Hopelessness Scale, Crafft, and the family Apgar. Results: A total of 312 adolescents participated, 65.4% were women and 30.4% of the participants were 16 years old. Of the total of participants, 42.3% presented suicidal behavior, 41.7% for suicidal ideation, whereas for suicide attempt 31.2% was obtained. The risk of suicide attempt was measured using the Plutchik scale, in which 35.5% of the respondents presented a moderate to severe risk. Hopelessness was observed in only 10% in this population. 52.2% of those who had had sex at an early age had suicidal behavior (p of 0.016). Those who reported having been abused (18.0%), 69.8% had suicidal behavior (p of 0.000). For the current mood, at the time of the survey, those who were very sad and sad, had a higher percentage of suicidal behavior (p of 0.000), the same went for those who said they presented sadness in the last week prior to the survey. A 60.6% of those who did not feel comfortable with their school performance showed suicidal behavior (p of 0.002). Of the total of respondents who presented consumption of alcohol and illicit substances, 73.8% presented suicidal behavior (P of 0.000). 80% of those with severe family dysfunction had suicidal behavior (p of 0.000). No relationship was found between sexual orientation of the participants and suicidal behavior (p 0.069). Conclusion: A statistically significant relationship was found between the majority of the factors studied and suicidal behavior. Therefore, these factors should be emphasized because this is where much of the problem resides. These are preventable, but if the rate of suicidal behavior is not addressed in adolescents, one can only observe as this behavior continues to climb towards one of the leading causes of mortality in this population.

No. 178

SKA2 Gene rs7208505 Polymorphism in Patients With Suicidal Behavior

Poster Presenter: Jesús Mesones

Co-Authors: Maria D. Perez-Carceles, Isabel Legaz, Alejandro Belmar

SUMMARY:

Background: Suicide is considered one of the problems with the greatest impact on public health, and for this reason, the different biological mechanisms involved are currently being investigated. Recent studies have observed the involvement of polymorphic variations of the SKA2 gene with suicidal behaviour, constituting a possible target of susceptibility. This gene is involved in the neuroendocrine system, regulating the response to stress, so that genetic variations could contribute to its deregulation, thus favouring suicidal behaviour. The aim of this work was to analyze the frequency of polymorphism rs7208505 of the SKA2 gene in patients with suicidal behaviour and compare it with healthy control individuals. Methods: Nuclear DNA was extracted from saliva samples using standardized methods. The sociodemographic characteristics of the patients, type of suicidal behaviour (ideation or attempt), method used (over-use of drugs or venosection), psychological diagnosis (personality disorder or affective behaviour) and toxicity intake were collected in a total of 15 patients with suicidal behaviour and compared with 73 healthy control individuals. The genotypic analysis of rs7208505 polymorphism of the SKA2 gene was performed using KASPAR technology. Patients were classified into three genotypes: wild homozygous (TT), heterozygous (TC) and mutant (CC). Pearson's X2 test and Fisher's Exact Test were used to compare variables. $P<0.05$ were considered statistically significant. Results: Patients with suicidal behaviour

were mainly women (80%), with an average age of 43.8 years and married marital status (60%). Drug over-use was the main method chosen (66.7%) by patients who attempted suicide (73.3%). All patients had personality or affective disorders (46.7% and 53.3%, respectively) and most did not consume any type of toxic (73.3%). The analysis of polymorphism in the patients showed a greater frequency of heterozygous genotype (TC; 60%) with respect to the rest of genotypes, its distribution being similar to the control group. In patients with suicidal attempt, a slight decrease in the frequency of the CT genotype (54.5%) and an increase in the frequency of mutant homozygotes (CC; 27.3%) were observed. Patients with personality disorder showed a high frequency of the mutant genotype (42.9%) with respect to patients with affective disorder. Allelic distribution in all cases was similar with no statistically significant differences. Conclusion: In our population, the genotypic and allelic distribution of the SKA2 gene rs7208505 polymorphism was similar in both patients and controls, although a greater frequency of the mutant genotype was observed in patients with suicidal ideation and consumption of toxics. These preliminary data will have to be checked in future in older cohorts of patients.

No. 179

Discharge Assessment of Iatrogenic Provision of Access to Lethal Means Via Psychotropic Medication

Poster Presenter: Eimear Cleary, B.Sc.

SUMMARY:

Introduction: Restricting access to lethal means is an effective suicide prevention strategy (Mann et al., 2005). However, there is little discussion in the literature about the potential contribution of prescribing practices on discharge from inpatient psychiatric care (which has been established as a high-risk period for suicide (Olfson et al., 2014)) to suicide deaths by overdose (Fernandes & Flak, 2012). This study aimed to assess the quantity and toxicity / lethality of psychotropic medication being prescribed on discharge from psychiatric care to those with and without indices of suicidality. Methods: Audit methods were used to assess psychotropic medication doses prescribed to patients on discharge from inpatient psychiatric care in a large urban psychiatric unit. 50 charts were randomly selected, 28 of which had full prescription data. All psychotropic medications were documented (dose x duration), and converted to their equivalent doses of neuroleptics, antidepressants and anxiolytics using the Maudsley Prescribing Guidelines (Taylor et al., 2015). Mood stabilizing medication including lithium and anti-convulsant medications were also documented (dose x duration). Patient demographics including diagnosis and indices of suicidality were also documented, where available. Results: The hospital study indicated there is significant variability in the amount of psychotropic medication being prescribed on discharge from inpatient care, ranging from therapeutic to potentially fatal doses, with no specific guidelines in place advising otherwise. 11 of 28 patient prescriptions analysed contained potentially fatal doses of either neuroleptic or antidepressant equivalent medication. There was also significant prescribing of general medications to treat conditions such as heart disease, hypertension and gastro-intestinal disorders. Discussion: Patient discharge from inpatient psychiatric care presents a golden opportunity to moderate access to potentially fatal psychotropic medication as an iatrogenic provision of lethal means for suicide during a period of increased risk for suicidal acts, and in a group at increased suicide risk. Results indicate that current prescribing practices may be a missed opportunity to intervene in this regard. The burden of co-morbid medical illness for patients with mental illness and the prescribing of general medications for these conditions on discharge only adds to the un-modified provision of lethal means. Prescribing practices may be impacted by resources and thus the current aftercare model in Ireland needs to be re-assessed and revised, with particular focus on discharge and the early post-discharge period.

No. 180

Engagement and Adherence Protocol for Psychosocial Interventions for Middle-Aged and Older Adults Hospitalized for Suicidality

Poster Presenter: Elizabeth Arslanoglou
Co-Author: Dimitris Kiosses, Ph.D.

SUMMARY:

Background: Middle aged and older adults

hospitalized for suicidality are at high risk for suicide during the first 3 months after discharge [1]. Lack of treatment follow-up after discharge is associated with elevated suicide risk [2]. To increase engagement in and adherence to psychosocial interventions post-discharge for this population, a multidisciplinary team at Cornell, including psychologists, social workers, and research assistants, developed the Engagement and Adherence Protocol (EAP). Methods: The EAP includes the following strategies. Engagement Strategies: 1. Communication between treatment teams: The therapist communicates with the inpatient treatment team to ensure the patient's suitability for the intervention. 2. Rapport: The therapist approaches the patient during their inpatient stay to discuss the techniques of the intervention and to practice the interventions' techniques on a specific problem. 3. Sessions with family members: The therapist, if the patient agrees, meets with the family members, explains the intervention, and identifies concerns that the family members may have about the patient and the treatment. 4. Problem List: The therapist and the patient create a problem list including life stressors and potential barriers to treatment adherence that they will work on after patient's discharge. Adherence Strategies: To increase adherence, the EAP uses the following approaches: 1. Communication during the first two weeks: The therapist checks in (with brief phone calls) with the patient frequently during the first two weeks after discharge, when the risk of suicide or dropping out is particularly high. 2. Support in-between sessions: When the patient is facing a significant stressor, the therapist incorporates emotion regulation techniques to cope with the stressors, including WellPATH, a tablet app that was developed to help patients regulate their emotions in-between sessions. 3. Family: The therapist incorporates the family or significant others in the treatment after the patient's consent. 4. Stigma: The therapist addresses the stigma associated with hospitalization and suicidal behavior. Results: The EAP was applied to 22 patients hospitalized in 3 inpatient units at Weill Cornel Medicine/New York Presbyterian, who were recruited for a study investigating the effects of a 12-week emotion regulation psychosocial intervention aimed to reduce suicidal ideation post-discharge. We will describe the EAP and use a case study to highlight the application of engagement and adherence strategies. Conclusion: The EAP was developed to increase the possibility of participation in psychosocial treatment post-discharge and to improve adherence during the 12-weeks of treatment. Engagement and adherence to psychosocial interventions is important especially in middle aged and older adults who have been hospitalized for suicidality. This group is at high risk of suicide especially after the first 3 months of hospital discharge.

No. 181

A Suicide Risk Monitoring Tool to Inform Decision Making About Ongoing Level of Inpatient Care: Preliminary Psychometrics

Poster Presenter: Malik Umer Farooq, M.D.
Co-Authors: Cynthia Claassen, Sulaimon Bakre, Leslie Wayne Smith, M.D.

SUMMARY:

Background: The Joint Commission's Sentinel Alert 56 call for suicide risk screening among patients with a behavioral health chief complaint using evidence-based tools. However, comprehensive care of suicidal individuals can require up to three suicide risk detection protocols (brief screen, intermediate risk screen, full psychiatric risk assessment) as well as a risk monitoring tool that tracks identified risk over time in relation to treatment. Screening efforts in large public health settings require that all tools be brief, validated, cost-effective, easily administered, and understandable at a 4th-6th-grade reading level. These protocols should classify patients as being at low, moderate or high risk in a consistent manner, and they should all be tied to risk level- and site-appropriate care plans. Only a small number of existing tools meet these criteria. Brief, dedicated risk monitoring tools structured to maximize patient engagement are particularly scarce. In Fall 2017, the John Peter Smith Healthcare Network (JPS) in Fort Worth, TX implemented a comprehensive, measurement-based suicide risk protocol which includes a suite of risk detection and monitoring tools. Here we report on preliminary validation analyses for a newly-created suicide risk monitoring tool. Method: Items on the new monitoring tool were selected after comprehensive,

structured review of available literature and analyses of existing tools. Items from validated instruments in the public domain addressing the above constructs were aggregated into a 7-question, 5-point Likert scale tool. Sensitivity, specificity, negative and positive predictive value and likelihood ratios utilized clinician decision-making as the gold standard against which the instrument's risk classifications were compared. Among inpatients on suicide precautions, high-risk was defined as line-of-sight or 1;1; moderate risk as q15 minute checks, and low risk as a decision to discharge. During the study, the tool was administered on a daily basis to behavioral health inpatients on at least some degree of suicide precautions. Suicidal events before and after implementation of the new tool were also assessed. Results: Results suggest that the most critical domains to assess repeatedly over time are dynamic factors, including recent: frequency/duration of ideation, psychomotor restlessness/agitation, sleep disturbance, anxiety, negative feelings about self in relation to others and hopelessness. Risk monitoring tool scoring changes dropped significantly within 0-2 days before clinician category change in a majority of cases. Item-by-item analyses revealed that some factors were more predictive of level change than others. The tool was modified after initial validation exercises to drop items that did not appear to be predictive and the revised instrument will be presented. Conclusion: The JPS Risk Monitoring Tool demonstrates reasonable initial reliability and validity. It meets selection criteria and requires minimal training to administer.

No. 182

Is a Psychiatric Disorder Responsible for Suicidal Acts on the Infant and Jouvenile Population?

Poster Presenter: Moises Zouain

SUMMARY:

Background:Using the studies that have been done at a global, regional and national levels of suicide, this research seeks to deepen the understanding of suicide and the various factors associated with suicide, especially social, behavioral and personal factors in children. Based on what was found in an investigation carried out in the city of Santiago, Dominican Republic in 2010, this study intends to update what was discovered. The study aims to quantify and analyze the main methods implemented to carry out suicide, the main related psychiatric antecedents, the predominant psychosocial characteristics and the relationship between age and sex, and how this factor were related to suicide attempt in children. Methods and techniques: A cross - sectional descriptive study of primary source was carried out, in which the population investigated consisted of patients who attended the "Hospital Infantil Regional Universitario Dr. Arturo Grullón", during October 2016 - March 2017 for attempted suicide in children under 19 years of age. The necessary information was collected through a questionnaire (Familial APGAR and a modified Holmes-Rahe life stress scale) and a psychiatric interview conducted by a psychiatrist using DSM V criteria for the possible diagnostics. Results: The results found that the groups with the most suicide attempt were those over 14 years of age, those of female sex, Catholic religion, with high family functionality. Most denied substance use, and only 3 patients had a psychiatric disorder. Conclusions: Psychiatric disorders where present on the studied population but wasn't a predominant finding during the investigation, impulsive behavior was a more common finding during the psychiatric interviews. More research should be done to study this phenomenon. This study only presents the characteristics of patients who attempted suicide. Other studies should take into account which of these factors has some causality with suicide attempt. Key Words. Suicide. Suicidal attempt. Psychiatric Factors. Minors. Autolysis. Conduct. Stress. Family. Suicidal Method

No. 183

Openness to Suicide as a Moderator of the Relation Between Hopelessness and Suicidality

Poster Presenter: Nicolette Molina
Co-Authors: Mariah Hawes, M.A., Haitisha Mehta, Cindy Forestal, Zimri Yaseen, M.D., Igor I. Galynker, M.D., Ph.D.

SUMMARY:

Attitudes towards suicide have been implicated as a risk factor for suicide, yet the literature on how they impact suicidality and interact with other factors to confer risk is limited. The present study investigated whether openness to suicide moderates the

relationship between hopelessness, a well-established risk factor for suicide, and suicide ideation (SI). Adult psychiatric outpatients with varying diagnoses (n=394) were administered the Suicide Opinion Questionnaire-SF, Beck Hopelessness Scale, and Beck Scale for Suicide Ideation. A linear regression model predicting concurrent SI found that the interaction of hopelessness and openness to suicide significantly predicted severity of SI independent of the main effects of these factors (ß = 0.143, p < .001), suggesting a moderating effect of openness to suicide on the relationship between hopelessness and suicidal ideation. An exploratory analysis showed that the moderator works to temper the strength of the relationship between hopelessness and SI, in individuals low on openness to suicide. These results suggest that, for people who have negative opinions towards suicide, feelings of hopelessness are less likely to translate to thoughts of suicide. This finding indicates that attitudes towards suicide may be a useful area of investigation in pursuit of better understanding how risk factors for suicide interact.

No. 184

Resilience Moderates the Relationship Between Hopelessness and Suicidal Ideation

Poster Presenter: Olivia Varas
Co-Authors: Mariah Hawes, M.A., Igor I. Galynker, M.D., Ph.D.

SUMMARY:

Objective Resilience is associated with general wellbeing, and has been found to protect against negative outcomes, such as psychiatric symptoms. The purpose of this study is to explore whether resilience moderates the relationship between hopelessness, a primary risk factor for suicide, and severity of suicidal ideation when measured cross-sectionally and prospectively. To our knowledge, this is the first prospective study to examine this relationship. Methods Participants (N = 302) from three adult psychiatric outpatient centers completed the Connor-Davidson Resilience Scale (CD-RISC), Beck Hopelessness Scale (BHS), Beck Depression Inventory (BDI) and the Beck Scale for Suicide Ideation (BSS) at clinic admission. One month later, participants (N = 224) that could be reached returned to complete a second administration of the BSS as part of a follow-up assessment. To test this hypothesis, the CD-RISC, BHS, and a variable representing their interaction (CD-RISC x BHS), were entered into a regression model predicting BSS total score cross-sectionally. BDI score was also included in the model to account for confounding effects of depressive severity on this relationship. A nearly identical model was constructed to predict BSS total score assessed prospectively, with the addition of the BSS total score assessed at initial assessment as a predictor. Results When holding constant the main effects of resilience, hopelessness and depressive severity, the interaction variable was significant cross-sectionally (β = -0.175, p < .001), suggesting a moderating effect of resilience on the relationship between hopelessness and severity of suicidal ideation. In the second regression model predicting suicidal ideation prospectively, the interaction variable captured at initial assessment was significant (β = -0.08, p = .003), suggesting a moderating effect of resilience on the prospective relationship between hopelessness and severity of suicidal ideation. Conclusion Resilience interacted with hopelessness to predict severity of suicidal ideation at both initial and follow-up assessments in a general sample of adults entering outpatient mental health treatment. These findings provide support for building resilience as part of a comprehensive approach to suicide prevention. In addition, accounting for the attenuating effects of resilience may improve evaluation of suicide risk.

No. 185

Therapeutic Benefits of Communication and Interaction Between Human and Animals: Animal-Assisted Therapy

Poster Presenter: Juan Pablo Licciardo, M.D.

SUMMARY:

Animal Assisted Therapies are growing in clinical practice. The curative potential of contact with animals is in practice greater than what is now known in academic circles. Within this situation we are paying particular attention to communication systems, sociability and breeding among animals, and mostly how it is transferred to humans. Animals, especially prey ones such as horses or sheep, must set up permanent, subtle and effective

communication channels. For this, they use all available resources; such as body posture, smells, sounds, etc. That is why they have developed a very high perception of everything that happens in the environment and in the other individuals. We can learn and use these abilities in human-animal communication; this turns to be a tool of great value in pathologies that involve serious difficulties in communicating with the environment. From a hysteria that dissociates bodily verbal communication, to a schizophrenia where verbal and physical contact is seriously damaged. By observing and practicing the communication systems of species where the communication is nonverbal, we learn different methods to approach patients with difficulties in verbal communication. For that purpose we incorporate animals that are not used to affective contact with humans and tend to run away from direct contact unless they are forced to it. At the same time, we study another communication model from a very deep place, which is the breeding and education of animals rescued since birth or early lactation. The imprinting is with the human who rescues and takes care of the animal, modifying genetic predestination, therefore later they can recognize human and other animals as members of their group. Patients interact with non-traditional animals. This already implies an impact, the realization that you can make contact with beings that in your imagination are so far away. It also helps patients to signify their parental relationships. When they notice the adherence generated by having been raised replacing the maternal function. The presence of animals, in particular a lamb and a pig, already generates a change of attitude in the professional and the general public. It favors the affective contact and diminishes the defenses. This is even more intense in patients. The contact itself is already therapeutic, and to this we add the interpretation of the behaviors and the discourse that emerges from the interaction.

No. 186

Role of Health Information Technology (HIT) in the Treatment of Mental Illness

Poster Presenter: Sumana Goddu, M.D., M.P.H.

SUMMARY:

Background: Health Information Technology (HIT) has promising applications in Mental Health. The applications range from Electronic Health Records, psychiatry-specific Computerized Provider Order Entry, Clinical Decision Support Systems, therapeutic interventions etc. Therapeutic interventions can be delivered via electronic platforms such as Telepsychiatry, email, instant messaging, internet, blogs, forums, social networks, podcast, computer games, virtual reality etc. e-Health is an umbrella term encompassing all of the above. Cognitive Behavioral Therapy (CBT) is amenable to be disseminated via technological media. Web-based CBT has an advantage that it is cheaper and less time/labor-intensive than traditional face-to-face CBT. HIT can also bring about primary care and mental health integration. Dr. Thomas Insel proposes some solutions to leverage HIT to advance mental health. For example Big Data analytics in psychiatry, preemptive diagnosis of depression or psychosis by collecting biomarkers like speech patterns, exploring autism biomarkers, and delivery of psychosocial therapeutic interventions via smart phones. In this study, we review the various therapeutic interventions that hold promise for mental health disorders. Method (Literature Review): We searched PubMed using search terms like Health Information Technology (OR) Health Informatics (AND) Mental Health (OR) Psychiatry (AND) treatment (OR) therapy. Our search yielded a total of 96 articles. Of them 50 were retained based on titles. We went through the 50 abstracts and finally retained 18 articles for literature review. A general search yielded 2 additional articles. Discussion: Many of the studies we found were done outside of USA. Several modes of psychotherapies (eg. CBT) can be effectively delivered via electronic platforms such as internet-based, mobile-based and social-media based interventions. The spectrum of mental illness that could benefit from such CBT are depression, anxiety, eating disorders, chronic pain etc. Mobile health (m-Health) platforms are another very useful media with several advantages. VR is another technology that has applications in areas such as PTSD, forensic psychiatry etc. Another huge benefit of HIT based interventions is that they can be disseminated in large scale, at a cheaper price, and can improve accessibility to hard-to-reach populations such as homosexuals, remote areas etc. Telepsychiatry improves access to remote areas and

ensures compliance, regularity and continuity of care. Computer Games specifically designed as mental health interventions are successful in cases such as adolescents with behavioral issues and elderly with cognitive issues. Conclusion: Promising HIT solutions (e-health) for mental health include web-based CBT, mobile Health, VR, computer games etc. Till now we have only sought biological and behavioral solutions for mental health disorders. It is time to look at technology as a solution as well.

No. 187

Quantitatively Improved Well-Being of Veterans With PTSD With Adjunctive Art Therapy During Cognitive Processing Therapy

Poster Presenter: Kathleen P. Decker, M.D.

SUMMARY:

Background: Studies show that combat operations impose a heavy psychological toll on service members as approximately 30% of veterans returning from Iraq and Afghanistan required clinical treatment for posttraumatic stress disorder (PTSD) attributed to combat exposure. One of the most commonly used treatments for combat PTSD is Cognitive Processing Therapy (CPT). However, an estimated 30% of veterans are only partially responsive to this treatment. Art therapy has successfully used to facilitate recovery from PTSD for childhood trauma and rape. Although there are case reports and uncontrolled trials of its use in military and veteran populations, art therapy has not been studied systematically for treatment of combat PTSD. This poster presents quantitative results of the first known, randomized, controlled trial which compares art therapy in conjunction with Cognitive Processing Therapy (CPT) to CPT alone for treatment of veterans with combat Posttraumatic Stress Disorder (PTSD). Methods: Veterans who met DSM-V criteria for PTSD from combat who scored greater than 50 on the PCL-M. All veterans were in residential treatment for PTSD. Study inclusion criteria included absence of Traumatic Brain Injury (TBI) or mild TBI and no active substance use disorder, and both genders were included. Exclusion criteria included: active psychosis, active substance use disorder, active suicidal ideation, and moderate or severe brain injury. Sixteen experimental and fifteen control subjects were randomized to receive either eight sessions of CPT and eight sessions of individual art therapy, or eight sessions of CPT and eight sessions of supportive therapy. Outcome measures include Beck Depression Inventory-II (BDI-II), Post-Traumatic Checklist-Military (PCL-M), and subjective ratings of treatment benefit using a Likert scale. Results: The change in PTSD symptoms was examined by Analysis of Variance (ANOVA). Both groups improved with time in treatment ($F=33.9$, $p<0.000$, η

No. 188

Indirect Exposure to Violence and Mental Health Outcomes Among a Community Based Sample of Youth: The Need for Trauma-Informed Programs

Poster Presenter: Erica Gollub, Dr.P.H., M.P.H.
Co-Authors: Jakevia Green, M.P.H., Lisa Richardson, Ph.D., Danielle Broussard, M.D., M.P.H., Denese Shervington, M.D., M.P.H.

SUMMARY:

INTRODUCTION. Believe in Youth – Louisiana is a trauma-informed (TI) reproductive health intervention intended for Southeast Louisiana youth aged 11-19 years, enrolled from public middle and high schools, community-based organizations, after-school programs, and juvenile justice programs. METHODS. An emotional wellness screener (EWS), adapted from clinical diagnostic criteria and national surveys, assessed exposure to traumatic events and symptoms of post-traumatic stress disorder (PTSD) and depression. We report here on prevalence of indirect exposure to violence and adverse mental health (MH) outcomes, as well as associations of demographic variables with violence exposure and adverse MH outcomes. RESULTS. From January 2016 to May 2017, 1548 participants were administered and completed the EWS (mean age 13.5 yrs; 56.7% female, and 43.3% male). Most youth (93.0%) identified as African American, and 8.1% as Hispanic/Latino. Youth in grades 7 (24.3%), 8 (29.2%), and 9 (26.2%) comprised the majority of the sample. Participating schools (n=33) had a high proportion of students eligible for free/reduced lunch (mean 88.7%). Univariate results. EWS respondents reported extremely high levels of exposure to violence: 29.8% witnessed violence against a parent; 41.7% witnessed a shooting/stabbing/beating; 18.3% witnessed a

murder; and 53.8% experienced the murder of someone close. Frequency of adverse MH outcomes was high: 21.2% screened positive for depression; 45.7% for lifetime PTSD; and 26.9% for current PTSD. Bivariate results. More males than females reported witnessing a shooting/stabbing/beating (p=.04), yet females more often reported experiencing the murder of someone close (p=0.001). Indirect violence exposure generally increased with age and grade level. Youth attending schools with >=90% free/reduced lunch participation (FRLP) showed significantly higher levels of violence exposure compared to youth in schools with <90% FRLP. Females endorsed significantly higher levels of depression (21.4% vs. 9.7%), and lifetime (53.9% vs. 34.9%) and current (32.5% vs. 19.6%) PTSD, compared with males (p<.0001, all comparisons). Positive screens for PTSD, unlike those for depression, were most frequent at younger ages. FRLP demonstrated direct association with depression and both current and lifetime PTSD. Multivariate results. Female sex (aOR=2.6), FRLP (aOR=1.4 for >=90% vs. <90%) and the number of different indirect violence exposures (aORs from 1.3 to 10.4), were significantly associated with a positive screen for any adverse MH outcome. CONCLUSION. Levels of witnessed violence were substantially greater than those reported in national surveys of youth. Adverse MH symptom prevalence was extremely high and increased proportionately with frequency of different exposures to violence. The data provide strong evidence of the urgent need for TI school-based and other community-based awareness, training, intervention, and policy initiatives.

No. 189

Exploring the Effect of 3,4 Methylenedioxymethamphetamine (MDMA) on Therapeutic Alliance

Poster Presenter: Emily Williams

SUMMARY:

Background: Posttraumatic Stress Disorder (PTSD) is a chronic and disabling condition associated with significant morbidity and mortality, including significantly increased risk for suicide, violence, and substance abuse2. Current treatments include pharmacotherapy as well as psychotherapy, but many patients either do not respond to treatment or find these treatments intolerable. This has led to a call for research into alternative treatments. Growing evidence suggests that 3,4-methylenedioxymethamphetamine (MDMA) assisted psychotherapy shows promise as a novel treatment for PTSD. Prior to its rescheduling in 1985, MDMA was successfully used as an adjunct to psychotherapy. MDMA has continued to show significant promise as a supplement to more traditional treatments, due to subjective reports indicating that it can decrease defensiveness and enhance feelings of emotional closeness in therapeutic settings. Anecdotal reports also suggest that MDMA can produce acute positive social effects, improve communication, and increase feelings of closeness with others, all of which may increase the efficacy of psychotherapy. Due to these effects, there has been growing interest in the investigation of MDMA as an adjunct to psychotherapy, including two randomized controlled trials using MDMA-assisted psychotherapy for the treatment of PTSD. While early evidence is promising, the psychological and behavioral mechanisms of MDMA's effects in PTSD remain unknown. Methods: We have obtained video and transcripts of psychotherapy sessions from the above mentioned clinical trial of 22 individuals with PTSD and are performing both quantitative and qualitative analyses of these transcripts. Language-based indicators of therapeutic alliance will be quantified in these psychotherapy sessions using Working Alliance Inventory (WAI-OR), implementing a group of well-trained psychotherapy research raters. These markers will be correlated with other standardized measures of therapeutic alliance (e.g., Working Alliance Inventory- Self Report, WAI-SR) as well as with the primary clinical outcomes of the parent study (e.g., decreases in PTSD symptoms, Clinician-Administered PTSD Scale, CAPS). Conclusions: The overarching goal of this study is to determine the effects of MDMA on therapeutic alliance in a psychotherapeutic relationship. In the proposed study, we aim to quantify changes in therapeutic alliance induced by MDMA-assisted therapy. Results from this analysis will provide high-impact data on the mechanisms of MDMA-psychotherapy, a critical next step in developing a behavioral biomarker for efficacious MDMA-assisted

psychotherapy. This modality continues to show promise as adjunct to more traditional treatments in patients with treatment-refractory PTSD and this study may provide support for further inquiry into the psychotherapeutic explanations for the marked clinical improvements in psychedelic studies.

No. 190

The Influence of Race and Ethnicity on the Development of PTSD: A Prospective Study

Poster Presenter: Gabrielle Hodgins
Co-Author: Charles Barnet Nemeroff, M.D., Ph.D.

SUMMARY:

Background Post-traumatic stress disorder (PTSD) is a psychiatric illness characterized by an intense behavioral and emotional response towards actual or threatened death, violence, or injury. The lifetime prevalence of PTSD in the United States is estimated to be 6.8%. Previous studies have reported conflicting results regarding the development of PTSD across various ethnic and racial groups. Further, while early life stress (ELS) is known to be a predictive factor in psychiatric pathology, the role of ELS with regard to race and ethnicity in PTSD has not be adequately studied. Here we present data from a prospective study that investigates the psychobiological risk factors for the development of PTSD. Methods Participants aged 18-65 were recruited from a level 1 trauma center if they met criterion A of the DSM-IV TR criteria for PTSD. The sample included 208 participants who completed the Childhood Trauma Questionnaire (CTQ) at baseline, a PTSD Symptom Scale (PSS) at a 1 month, 3 month, and 6 month follow up visit, and a Beck's Depression Inventory (BDI) at a 1 month and 3 month follow up visit. Participants also provided demographic data including ethnicity and race. Ethnicity was defined as either Hispanic or non-Hispanic. Independent sample t-tests were conducted using SPSS in order to determine differences in development of PTSD and depression. Results At baseline, there were no statistically significant differences on the total CTQ score between ethnic groups or racial groups. Non-Hispanics reported higher PSS scores at one month (MD 4.840+/-2.259, p=0.034) and three months (MD 4.958+/-2.484, p=0.048). Participants who identified as black reported higher total PSS scores at one month (MD 7.624+/-2.222, p=0.001) and six months (MD 8.611+/-2.412, p=0.001) as well as higher total BDI scores at one month (MD 4.499+/-2.083, p=0.033) and three months (MD 5.593+/-2.290, p=0.001) than white participants. Lastly, a history of physical or sexual abuse predisposed participants to develop both PTSD and depressive symptoms. Emotional abuse predisposed participants only to developing depressive symptoms. Discussion In this prospective study of the development PTSD following a major trauma, we found that black participants and non-Hispanic participants were more likely to develop PTSD symptoms than their white or Hispanic counterparts. A plethora of factors may have influenced this outcome, including socioeconomic status, availability of mental health resources, and cultural attitudes towards mental illness. Further, a history of abuse was found to play a significant role in the development of both PTSD and depression, regardless of race or ethnicity. More research is needed to improve understanding of the development of PTSD, particularly given the conflicting nature of available data. Lastly, preventative efforts should be targeted towards individuals who may be at a particularly high risk for the development of PTSD.

No. 191

The Relation of Vascular Dysfunction and Impaired Well-Being With the Severity of ADHD and PTSD

Poster Presenter: Naser Ahmadi, M.D., Ph.D.

SUMMARY:

Objective: Comorbid Attention deficit hyperactive disorder (ADHD) and posttraumatic stress disorder (PTSD) in children is associated with the higher rates of psychiatric comorbidity and psychosocial dysfunction in adulthood. Recent studies revealed The presence and severity of PTSD is associated with impaired vascular function which predicts poor major adverse cardiovascular events. This study investigates the relation of vascular function, inflammation, well-being with severity of ADHD and PTSD symptoms in adolescents with comorbid ADHD and PTSD. Methods: Eleven adolescents (age:11±3yo (range:10-15yo), 50% female), underwent vascular function – measured as temperature rebound (TR) by reactive hyperemia procedure using Digital Thermal Monitoring (DTM)-, C reactive protein, homocysteine, and neuropsychiatric measures (i.e.

SNAP questionnaire, PERMA, gratitude, posttraumatic growth inventory, Connor–Davidson resilience scale, Clinician Administered PTSD Scale (CAPS) children version. Wellbeing were measured using multidimensional PERMA model (positive emotions, engagement, positive relationships, meaning, and accomplishment). Wellbeing was defined as low (PERMA score=3), average (PERMA score 4-5), and high (PERMA score=6). Results: A significant inverse correlation between ADHD and PTSD symptom and PERMA score (r2=0.53, p=0.001) as well as, vascular function (r2=0.67, p=0.001) was noted. A significant direction relation between vascular function, resilience, gratitude and PERMA score was noted. Vascular function and PERMA score were significantly lower in adolescents with SNAP score>40 and CAP score>30, compares to those with SNAP 28-40 and CAP score 16-30. Similarly, a significant direction reverse association between CRP and homocysteine with PERMA score and vascular function was noted. CRP and homocysteine were significantly higher in adolescents with SNAP score>40 and CAP score>30, compares to those with SNAP 28-40 and CAP score 16-30. Conclusions: The current findings reveal that severity of PTSD and ADHD is associated with impaired vascular function, increased inflammation, and lower levels of wellbeing, gratitude and resilience. This highlights the importance the role of measuring vascular function, inflammation and positive psychiatry batteries for early risk stratification of at risk adolescents with comorbid ADHD and PTSD.

No. 192

Efficacy of Maintenance Electroconvulsive Therapy in Comorbid Posttraumatic Stress Disorder and Major Depressive Disorder

Poster Presenter: Naser Ahmadi, M.D., Ph.D.

SUMMARY:

Background: Post-traumatic stress disorder (PTSD) and major depressive disorder (MDD) are frequently comorbid. Approximately 42 to 48% of patients with PTSD also meet diagnostic criteria for MDD. Maintenance electroconvulsive therapy (mECT) has been found to be efficacious for the prevention of recurrence of MDD. This study investigated the efficacy of mECT in the treatment of MDD with and without comorbid syndromal PTSD. Methods: This study includes 36 subjects, 26 with MDD and 10 with comorbid MDD & PTSD, receiving monthly mECT for a mean of 1.5 years. The mean age was 52±14 years and 25% were female. The change in PTSD and MDD symptoms in response to mECT was assessed using Clinical Global Impression - Severity Scale (CGI-S). Heart rate variability (HRV), 12-month hospitalization rate, suicide rate and all-cause mortality in response to mECT were assessed, and compared between groups using repeated generalized linear regression (GLM) analysis. Results: At baseline, there were no statistically significant differences in CGI-S scores, HRV between subjects with MDD alone and those with comorbid MDD and PTSD at baseline (P>0.05). After 12-months of mECT, a significant increase in HRV (mean difference: 10.9 95%CI 4.8-20.3, p=0.001) and decrease in CGI-S overall (mean difference: 3.5, 95% CI 3.3-3.6, p=0.001)], PTSD (mean difference: 3.4, 95% CI 3.2-3.6, p=0.001)], and MDD (mean difference: 3.8, 95% CI 3.5-3.9, p=0.001)] symptoms in both groups was noted (p<0.05). No psychiatric hospitalization or suicide occurred in any of the patients. Conclusions: Maintenance ECT is associated with improved HRV, reduction of both major depression and PTSD symptoms, and a favorable clinical outcome.

No. 193

Cultural Similarities in Anxiety: Maternal Behavior and Perceived Infant Temperament in Chinese American and European American Mothers

Poster Presenter: Dorothy Chyung, M.D.

SUMMARY:

Background: The limited research thus far on the relationship between maternal anxiety and infant temperament suggests intrusiveness and lower sensitivity in mothers and a more “negative” or “difficult” temperament in infants. There has been no research on the role of culture in this relationship, despite the importance of cultural differences in the presentation of anxiety, parenting, and infant temperament. For example, since Chinese culture values emotional moderation and Asian infants have been found to show lower arousal than European American infants, we might expect differences in maternal behavior and infant temperament associated with anxiety. The purpose of this study is to better understand the relationship

of maternal anxiety with both maternal behavior and perceived infant temperament by clarifying the role of culture through comparison of Chinese American and European American mothers. Methods: Chinese American and European American mothers and their 16-week old infants were recruited. Mothers completed questionnaires, including the Spielberger State-Trait Anxiety Inventory (STAI) and Infant Behavior Questionnaire (IBQ-R). Mothers and infants also participated in the Face-to-Face Still-Face paradigm (FFSF). Maternal behavior was coded during the first 2 minutes of the first episode, prior to the introduction of a stressor, as a reflection of how mothers generally play with their infants face-to-face. Results: This analysis included 55 Chinese American (CA) and 59 European American (EA) mothers and their infants. Chinese American mothers had a higher mean score for state anxiety (M=29.6, SD=9.4) compared to European American mothers (M=26.0, SD=5.7). There was no significant difference in scores of trait anxiety (CA M=34.1, SD=8.8; EA M=32.3, SD=7.69). When examining the relationship between coded maternal behaviors and maternal state or trait anxiety level, there was no significant difference between Chinese American and European American mothers. When examining the relationship between perceived infant temperament and maternal state or trait anxiety level, there was only a significant difference in trait anxiety and falling reactivity (p=0.04). That is, for European American dyads, there was a significant negative correlation between maternal trait anxiety and infant's rate of recovery from arousal or ease of falling asleep (r=-0.40, p=0.003), whereas no such relationship existed for Chinese American dyads (r=-0.002, p=0.991). Conclusion: There are not major differences between Chinese American and European American mothers in terms of the relationship between mothers' anxiety and their behavior during face-to-face play or their report of infant temperament. This is in spite of Chinese American mothers having higher state anxiety, a difference which may be related to the need to negotiate multiple different cultures of parenting. That European American infants with more anxious mothers have more difficulty with recovery from arousa

No. 194

WITHDRAWN

No. 195

Devastating Psychiatric Sequelae of Keppra: A Case Report

Poster Presenter: Ayol Samuels, M.D.

SUMMARY:

Keppra is a relatively new but widely used and effective antiepileptic medication. Its deleterious effects on mood and behavior are becoming more widely accepted. In this poster, I will review this literature as it pertains to both adults and children. I will then present a dramatic case that highlights the effects of keppra on mood and the importance of taking this potential complication seriously, especially in children and adolescents. The patient is a 17yo girl who was admitted to the state psychiatric facility for severe mood dysregulation and suicidality. She was hospitalized for many months and required almost daily manual restraints and PRN medication. She was on Keppra 1000mgBID for presumed epilepsy. Upon further history and record gathering as well as the witnessing of several seizure episodes, it was determined that all of the patient's episodes were likely psychogenic non-epileptic seizures and, in coordination with her neurologist, the keppra was tapered. For two months following the day keppra was discontinued, the patient required no restraints, no PRN medications, and was noted by all staff to seem like a totally different person. On further history, it became clear that her psychiatric symptoms started in tandem with initiation of keppra. I will close with some of the questions that remain unanswered and require further study in this area, such as how long after initiation are the effects usually seen and which patients are most vulnerable to this effect.

No. 196

Psychiatric Comorbidities in Patients With Dizziness and Vertigo Disorders: Who Needs Further Psychosomatic or Psychiatric Workup?

Poster Presenter: Jan Burmeister

SUMMARY:

Introduction: Vertiginous patients often present psychiatric symptoms, most commonly depression and anxiety. Although the multifactorial mechanisms

involved in vestibular dysfunction and subsequently symptom chronification are not fully understood yet, there is a consensus on the large overlap with somatoform disorders, a consensus which has ultimately led to integrated clinical concepts such as Persistent Postural-Perceptional Dizziness (PPPD). Methods: We conducted a prospective, observational study in a tertiary care center for disorders of chronic dizziness and vertigo as part of the Dizziness and Vertigo Registry (DiVeR) and from 2010 until 2017 enrolled a total of 12055 patients. In accordance to their final medical report subjects have been assigned to the following diagnostic groups: benign paroxysmal positional vertigo (BPPV), bilateral vestibulopathy (BVP), central vestibular syndromes, Meniere's disease (MD), persistent postural-perceptional dizziness (PPPD), polyneuropathy (PNP), vertigo/dizziness related to a somatoform disorder (SV), unilateral vestibulopathy (UVP), vestibular migraine (VM), vestibular paroxysmia (VP), presyncope / orthostatic vertigo (OV) and "other / unclear diagnoses" (UC). We systematically assessed specified vestibular symptoms, vertigo related symptom severity scores and psychiatric symptom scores: Depression was assessed using the general depression scale (ADS), anxiety was assessed using the STAI (state-trait-anxiety index), stress was evaluated by a custom questionnaire, and the Whitely-Index was used to assess hypochondrial worries and beliefs. Symptom severity and personal burden were evaluated using the Vertigo Symptoms Scale (VSS), Dizziness Handicap Inventory (DHI), and quality of life Short Form Survey (SF-12). Results: The average symptom severity as expressed by the VSS score overall was 33.6 (SD 19.6; range 0-131) ranging from 25.0 (VP) to 38.9 (PPPD). Patients were significantly substantially impaired in their everyday life with mean DHI scores ranging from 36.3 (VP) to 53.0 (CVS) and an overall mean score of 47.1 (SD 22.3 range 0-100). The median depression score was 15.00 (mean 16.70; range 0-58.00), being higher for the female subpopulation (median 16.00 and mean 17.5) and manifesting the highest scores in the subgroups PPPD (mean 19.10; median 18.00), SV (mean 18.30; median 17.00) and CVS (mean 17.5, median 16.5). The overall mean Whitely-Index score was 29.8 (median 28.00 Range 0-69.00) with median scores of 28 and higher in six subgroups ranging from 31.00 in PPPD and SV to 28.00 in PNP, BVP and VM. Discussion: This vertigo-related dataset is unique in its sample size and preliminary results point out the high prevalence of psychiatric symptoms in this population, as well as the importance of a multidisciplinary clinical approach to patients with chronic vertigo.

No. 197

Disease Nature Will Define Repetitive Transcranial Magnetic Stimulation (rTMS) Protocols

Poster Presenter: Adel Sayed Marei, M.D.

SUMMARY:

Introduction rTMS is a passive, non-invasive neuro-stimulation technique that has proven to be a safe and tolerable in both treatment and diagnostic paradigms. The first machine attaining USA Food and Drug (FDA) approval for treatment of drug resistant depression was in 2008. Until August 2017, the standard approved treatment targeting the Left Dorsolateral Prefrontal Cortex (LtDLPFC) was a 37 minutes per session, 2-5 sessions per week for a total of 20-30 sessions. The newer protocol will be accomplished in about 19 minutes only. Currently, rTMS research has projected into various Neuropsychiatry disorders namely: Autism Spectrum Disorder (ASD), Attention Deficit Hyperactivity Disorder (ADHD), Obsessive Compulsive Disorder (OCD), Schizophrenia (especially negative symptoms), Catatonic Depression, sleep disorders, various eating disorders, substance use disorders, Traumatic Brain Injury (TBI), strokes, Hypoxic Brain Injuries (HBI), Parkinson Disease (PD) and neurocognitive rehabilitation. Brains' Clinic® is a private clinic, Cairo, Egypt; that had been established in 2012. We have helped in developing and reestablishing the Neurophysiology Unit, at the Institute of Psychiatry at Ain Shams University Hospital. The following hypothesis is designated from either administering or supervising of at least 150 cases (average total 4500 sessions), of most of the disorders listed above, with case reports and abstract publications in the past years. Hypothesis Our protocols have lately been shaped by what we refer to as "Disease Nature" which is: the onset, course, duration, neuroanatomical correlates and pathophysiology of the disease.

No. 198

Reevaluation of Repetitive Transcranial Magnetic Stimulation (rTMS) Guidelines Needed Soon

Poster Presenter: Adel Sayed Marei, M.D.

SUMMARY:

Introduction Magnetic Stimulation (MS) which is known to a few as Time Varying Electromagnetic Field (TVEMF) or Pulse Electromagnetic Field (PEMF) alongside rTMS are examples of how the magnetic field could influence cellular physiology. Some of MS has been approved by the FDA for bone reunion in 1979. It was not until 2008 in the USA that rTMS got its first approval for treatment of drug resistant depression. That was after it was primarily approved in Canada a few years earlier. Based on the only attainable FDA report; The Guidance for Industry and Food and Drug Administration Staff rTMS: Class II Special Controls Guidance Document: Repetitive Transcranial Magnetic Stimulation (rTMS) Systems (Document issued on: July 26, 2011) which provides good informative dialogue which is still the bases of rTMS practices now a days. But are these bases valid today? Discussion The topics that need to be addressed are the out dated data on the Maximum Safe Train Duration (seconds) Limits for Avoiding Seizure (page 5 of the report) and the seizures themselves. On the top of page 5 of the FDA 2011 report, you will find a table that describes the limits of avoiding seizures. On the horizontal top bar, Intensity % of Motor Threshold (MT) began at 80%-220%. On the left vertical line was the frequency of administered which ranged from 1-25 Hz. The plotted boxes showed the duration in seconds corresponding to both horizontal and vertical lines. Theta Burst Stimulation (TBS); a form of stimulation which uses between 50-60 Hz (50-60 pulses per second) and has two forms; continuous cTBS or intermittent iTBS. cTBS is generally recognized to induce inhibitory effects and iTBS is recognized to induce stimulatory effects on stimulated site. “Theta Burst Stimulation” was used on pubmed.gov website. To date; the search engine yielded 1301 matches the earliest extending to 1981. The results described not only TBS but also theta bursts produced by the brain. To be more specific, “rTMS” was added to the search. 194 matches with the earliest published in 2004 entitled “The effect of short-duration bursts of high-frequency, low-intensity transcranial magnetic stimulation on the human motor cortex” which concluded “This means that it may be possible in future experiments to apply theta burst conditioning safely to the human cortex”. Between 2004 and 2011(they year the document was published in) there were 64 papers that mentioned TBS, rTMS research (almost 33% of all TBS papers published to date). The risk of seizures was addressed by a recent clinical review (2017) referring to seizures as “accidental seizure” to be <0.1%. Another conclusion could be derived from the 2016 systemic review of the safety of rTMS therapy in epilepsy patients which concluded “that the risk of seizure induction in patients with epilepsy undergoing rTMS is small and that the risk of other adverse events is similar to that of rTMS applied to other conditions and to hea

No. 199

Resting State Functional Connectivity of Internet Addiction With Comorbid Depression

Poster Presenter: Jaeun Ahn

Lead Author: Jaeun Ahn

Co-Authors: Young-Chul Jung, Deokjong Lee

SUMMARY:

Objectives: Internet addiction (IA) is known to have a high rate of coexistence with other psychiatric diseases. Among them, depression is one of the most common comorbid disorders in IA. Although many researches have investigated on the pathophysiology of IA, neurobiological basis underlying the close association between depression and IA has not been fully clarified. Previous neuroimaging studies have demonstrated the functional and structural abnormalities of the anterior cingulate cortex (ACC) in IA. Numerous evidences have indicated that functional connectivity (FC) of the ACC to other brain regions is associated to the manifestation of various aspects of IA. The ACC is complexly linked to other regions of the brain, and sub-regions of the ACC are connected distinctly to the different regions of the brain, representing distinct functions. In this study, we attempt to explore the FC abnormalities of sub-regions of the ACC in IA subjects with comorbid depression. Methods: The Internet Addiction Test (IAT) was applied to evaluate for the severity of IA

and the Beck Depression Inventory (BDI-II) was used to assess comorbid depression symptoms. The resting-state seed-based FC analysis was performed in 22 young male IA adults with comorbid depression (BDI-II: 25.6±4.3, IAT: 71.7±10.1), 21 young male IA adults without comorbid depression (BDI-II: 7.6±3.4, IAT: 69.4±12.5), and age-matched 20 male healthy controls (BDI-II: 5.0±3.5, IAT: 26.4±9.8). The ACC-seeded FC was evaluated by using the CONN-fMRI FC toolbox. Three sub-regions of the ACC were selected as seed regions, including the dorsal ACC, the pregenual ACC, and the subgenual ACC. Results: In comparison with healthy controls, IA subjects with comorbid depression showed higher FC between the dorsal ACC and the default mode network (DMN)-related regions (the precuneus, the posterior cingulate cortex and the cerebellum lobule IX) and between the pregenual ACC and the precuneus. IA subjects with comorbid depression also showed lower FC between the pregenual ACC and the dorsomedial prefrontal cortex and the subgenual ACC and the precuneus. In comparison with healthy controls, IA subjects without comorbid depression showed higher FC between the pregenual ACC and the salience network (SN)-related regions (the inferior frontal gyrus/insular cortex). In the comparison between IA subjects with and without comorbid depression, IA subjects with comorbid depression showed lower FC between the pregenual ACC and the supplementary motor area and between the subgenual ACC and the dorsolateral prefrontal cortex. Conclusion: In the current ACC-based FC analysis, depressed Internet addicts and non-depressed Internet addicts showed different patterns of FC abnormalities. While IA patients without depression showed altered FC between the ACC and brain regions of the SN, IA patients with depression showed altered FC between the ACC and brain regions of DMN. Furthermore, IA patients with comorbid depression revealed that hypoconnectivity between the pregenual ACC and the dorsomedial prefrontal cortex, reflecting their difficulties in top-down control over emotional processing. Our findings suggest the possibility that the FC abnormality of the dorsomedial prefrontal cortex may be a useful target of biological therapy for patients with IA, especially those with comorbid depression.

No. 200

Autonomic Cardiac Modulation in Depression: Effects of Inpatient Care

Poster Presenter: Katharina Hoesl
Co-Authors: Max Hilz, Thomas Hillemacher

SUMMARY:

Background: Major depressive disorder is associated with diminished cardiovascular autonomic modulation. In the majority of patients, antidepressive inpatient treatment has effects on the psychopathology while therapeutic effects on cardiovascular autonomic modulation are poorly known. The objective of this study was to assess effects of three weeks of impatient care on depressive psychopathology and on cardiovascular autonomic modulation. Methods: In 22 depressed inpatients (12 women, mean age 37.67±15.51 years) and 41 healthy controls (30 women, mean age 36.90±13.08 years) we recorded electrocardiographic RR-intervals (RRI), continuous blood pressure (BPsys, BPdia) and respiration (RESP) within 24 hours after hospital admission and after 3 weeks of inpatient therapy (treatment as usual). We calculated RRI standard deviation (RRI-SD), RRI coefficient of variation (RRI-CV) and the square root of the mean squared difference of successive RRIs (RMSSD), low and high frequency powers of RRI (RRI-LFpower, RRI-HFpower), total RRI power (RRI-TP), the ratio between low and high frequency powers (RRI-LF/HF-ratio), normalized units of low and high frequency power (RRI-LFnu/RRI-HFnu), low and high frequency powers of systolic blood pressure (BPsys-LFpowers, BPsys-HFpowers), and baroreflex sensitivity (BRS). Symptoms of depression were assessed using Hamilton rating scale for depression (HAMD) and Beck Depression Inventory (BDI). We compared autonomic and psychometric parameters between patients and controls (t-test on normally distributed or Mann-Whitney-U-Test on non-normally distributed data) and between the two points of assessment (repeated measures ANOVA on normally distributed or Wilcoxon Test; significance: $p<.05$). Results: RRI, RRI-SD, RRI-HFpower, RRI-LF/HF-ratio, RRI-TP, RRI-HFnu, BRS, CV, and RMSSD were significantly lower in patients than controls; RRI-LFnu, BDI scores, and HAMD scores were significantly higher in patients than controls during

both points of assessment. In patients, BDI and HAMD were significantly lower after 3 weeks of inpatient care than upon hospital admission; in contrast, autonomic parameters remained unchanged. Conclusion: During both points of assessment, we found significant differences in cardiovascular autonomic modulation between patients and healthy controls, whilst in patients autonomic parameters remained unchanged after 3 weeks of impatient treatment. Despite improvements in psychopathology over the three weeks of treatment, reduced cardiovascular autonomic modulation does not seem to improve. Funding: No financial support was received for this study.

No. 201

A Rare Overlap of Serotonin Syndrome and Status Epilepticus in the Context of Alcohol Intoxication

Poster Presenter: Naga Prasuna Vanipenta, M.D.
Co-Authors: Waquar Siddiqui, M.D., Binod Wagle, M.D., Abdullah Bin Mahfodh, M.D.

SUMMARY:

Mr. B., a 22-year-old male with a past psychiatric history of unspecified depressive disorder, unspecified anxiety disorder and alcohol use disorder, presents to the Emergency Department (ED) following multiple convulsive seizures at hotel, continued to have multiple seizures in the ED, he was also unresponsive, hypotensive and was subsequently intubated. Patient was reported to be drinking alcohol the night before and started having seizures 4 hours before his admission to the ED. His blood alcohol level was 189 mg/dl, and urine drug screen was negative. ED team considered the differential diagnosis of opioid intoxication, he was given Naloxone but did not respond. He continued to have multiple jerky movements and was given Midazolam and later loaded with Levetiracetam. He was on Bupropion and Fluoxetine and had no prior history of seizures/epilepsy, although he was found to be using the antidepressants more than prescribed. Patient had clonus, hyperreflexia, rigidity, together with a high fever, dilated pupils, increased creatine phosphokinase (CPK), and increased creatinine all suggestive of serotonin syndrome. Stat Electroencephalogram was reflective of status epilepticus (SE). Seizures have been reported with serotonin syndrome but there has been no reports of serotonin syndrome presenting with SE. In this poster we review and discuss key published studies of serotonergic system, the receptor subtypes which are relevant to epilepsy, alcohol intoxication/ cessation and its role in modifying the seizure threshold and antidepressants versus the typical onset of seizure activity. Even though our patient has multifactorial risks for having seizures, a new onset status epilepticus in the setting of serotonin syndrome has not been reported in the literature and is something to be aware of when managing a patient with multiple complex comorbidities.

No. 202

Physician-Assisted Suicide: Medical Students' Knowledge, Attitude and Behavior

Poster Presenter: Cheryl Ann Kennedy, M.D.
Co-Authors: Chiadikaobi Okeorji, Omar Mohamed, Mansi Shah

SUMMARY:

Background: Despite ethical, legal, and, moral questions surrounding physician assisted suicide (PAS), public interest in the subject and calls for its legalization have increased in recent years. Medical students are likely to encounter situations requiring discussion of PAS. Given that it is legal in five US states and other state legislative committees are considering it, it is important that trainees become familiar with the subject especially since it is rarely addressed in medical school curricula. At our urban academic medical center, we surveyed a sample of medical students to assess their knowledge, attitude and behavior-intent (KAB) towards PAS. Methods: A convenience sample of medical students responded to an anonymous survey questionnaire via email and on paper. We examined socio-demographic, educational and KAB variables. Bivariate analysis was used to learn what variables are associated with willingness or not to participate if PAS were legally permitted. Logistic regression was used to determine statistically significant associations. Result: Of the 119 respondents (712 possible, ~16% response rate), 60% were females (n=71). The majority (52% n=62) were first year medical students, 95% were under 30 years old (n=113). Knowledge about PAS and having some clinical experience was reported by 86%. Six

percent said they were very knowledgeable; 2% said not at all knowledgeable. 70% knew that PAS is legal in some US states and 78% said that PAS should be legalized. Nearly three-quarters (74%) thought that patients should have the right-to-die. Nearly half (46%) indicated willingness to participate in PAS if legal; 42% reported having conviction about PAS. Chi square analysis showed that females are less likely to participate in PAS if legalized (p=0.00132); younger medical students are less likely to participate (p=0.0316); those with some conviction about PAS (p=0.0227) and those with religious conviction (p=0.0023) are less likely to participate. Those who answered 'yes' to the 'right-to-die' question are more likely to participate (p=0.0106). Students are more likely to participate in PAS given the following clinical scenarios: terminal metastatic breast cancer in 75-year-old (p<0.0000001); Metastatic colon cancer in 65 year-old with less than 6 months to live (p=0.0070); irreversible liver failure in 25 year old with suicide attempts (p=0.00004); elderly dementia patient with no relative (p=0.00066); symptomatic Huntington's disease in 65 year old (p=0.000001). Logistic regression showed a statistically significant association between willingness to participate in PAS and a scenario of terminal breast cancer in the elderly (p=0.015). Conclusion: Age of students, gender, and conviction (religious or otherwise) influence the willingness to participate in PAS. Certain clinical scenarios also influence the potential behavior of students regarding PAS.

No. 203

When the Psychiatric Illness Prevents a Treatable Breast Cancer in a Young Patient

Poster Presenter: Larissa Lobo
Lead Author: Larissa Lobo
Co-Authors: Maira Rodrigues, Leonardo De Jesus, Natalia Santos

SUMMARY:

Female, 31 years old, comes to compulsory hospitalization at Mario Covas' State Hospital, to be treated for breast cancer, which was diagnosed in August 2016 as an infiltrating ductal carcinoma on the left breast, using neoadjuvant tamoxifen since November 2016. Mammography showed BIRADS 5, staged as T3N1Mx. Patient was initially hospitalized by oncology, but had to be transferred to the Psychiatry, because of the psychiatric decompensation. This patient is diagnosed with bipolar disorder type I since adolescence and wasn't taking any psychiatric medication for at least one year. During this hospitalization, she was staged again, it was seen that she already had bone, liver and lung metastasis. We reintroduced antipsychotic and mood stabilizer, which improved initially the aggressiveness and the poorly collaborative behavior. However, we had to increase the dose of the medications, as well as associate antipsychotics, until we had to introduce Clozapine, because the patient wasn't responding to the treatment and she remained hostile, aggressive, and psychotic, without any criticism of morbidity. Besides, Tamoxifen had to be suspended, because it was interacting with the psychiatric medications, as well as reducing the dose of them. What was distressing in this case is the fact that the breast cancer could be treated with intravenous chemotherapy, but because of the psychiatric decompensation, patient had to be treated palliatively and showed discreet psychiatric improvement.

No. 204

Brain Tumor as a Possible Cause of First-Episode of Psychotic Mania on a Middle-Aged Man: A Rare Case Report

Poster Presenter: Larissa Lobo
Lead Author: Larissa Lobo
Co-Authors: Maira Rodrigues, Natalia Santos, Leonardo De Jesus

SUMMARY:

Male, 59 years old, missionary, married, two children. Came to hospitalization at Mario Covas' State Hospital due to behavioral change for about four months, with decreased need for sleep, increased sexualized behavior, desinhibition, oscillation of mood from expanded to angry, thought alteration, with mystical-religious delusions, grandiosity and criticism of morbidity absent. There was no previous psychiatric history during life, any comorbidity, any previous surgery or use of any medications. Skull magnetic resonance performed during hospitalization showed an expansive image on left temporal lobe, measuring 1,5 x 1,2 cm, what suggested possibility of an inflammatory or infectious process x blastomatous lesion. Over the

hospitalization, patient presented remission of the symptoms and good tolerability using Risperidone 4mg/day and Valproic acid 750mg/day. Psychotic content no longer appeared and patient remained collaborative, with fewer episodes of mood oscillations, as well as improvement of morbidity criticism. Patient was evaluated by Infectology, which requested toxoplasmosis serologies (the image had a halo around, what seemed to be neurotoxoplasmosis) and all were negatives. In sequence liquor was collected and didn't reveal infectious cause; and electroencephalogram was normal. The neurosurgery team requested angiotomography, which also didn't show up any abnormalities on results. The neurosurgery team then reassessed the patient and suggested the diagnostic hypothesis of glioblastoma; patient was promptly sent to surgery and biopsy revealed the diagnosis of cavernoma. This case draws special attention for the fact that this neoplasm has a rare incidence (0.4 to 0.9% of the population), which grows and spreads slowly, but many times creates pressure. Symptoms include headaches, motor deficits, blurred vision, convulsions, bleeding, vertigo, cerebral vascular accident, dysarthria and intracranial hypertension syndrome. It's necessary to highlight the fact that the patient didn't present with any of the most common symptoms due to the neoplasm, but only the behavioral change, mood oscillation and psychosis appeared. It was concluded that the present behavioral change was caused by the cerebral neoplasm, diagnosed during psychiatric hospitalization and that the patient responded well to the conventional medical treatment using antipsychotics and mood stabilizers. He improved from the symptoms previously presented, which caused his psychiatric hospitalization.

No. 205

Psychotic Symptoms at the Onset of Lupus Disease: A Report of the Diagnostic Challenge

Poster Presenter: Maria Lucia
Co-Authors: Maira Rodrigues, Larissa Lobo, Luíza Martins, Leonardo De Jesus

SUMMARY:
A 16-year-old female patient was hospitalized involuntarily in psychiatric ward of a general hospital due to psychotic symptoms, disorganized behavior, restlessness and religious mystical content thinking. As reported by the family, it was the first psychotic outbreak in the previously healthy patient, without previous psychiatric or organic comorbidities. Clinical and neurological evaluation and laboratory tests, including analysis of cerebrospinal fluid, were performed at the entrance of the hospital, which showed no alterations. The patient attended with lowering of the level of consciousness followed by seizures confirmed by electroencephalogram and was referred to the intensive care unit. Magnetic resonance imaging of the skull and brain was performed, which showed no alterations. The main diagnostic hypothesis was encephalitis, which later, with rheumatic evidence, was confirmed as lupus encephalitis and lupus psychosis. We aim to discuss the challenge in diagnosing patients who open lupus with psychiatric symptoms with no previous history.

No. 206

Connexion Between Mania Episode and Recreational Use of Ketamine: A Case Report

Poster Presenter: Maria Lucia
Co-Authors: Cintia de Azevedo Marques Périco, Fernanda Prado

SUMMARY:
Introduction: Bipolar Affective Disorder (BD) is a chronic psychiatric disorder characterized by alternating states of depression and mania or hypomania, with great comorbidity to the use of psychoactive substances. Ketamine increases the release of dopamine in the striatal nucleus, and this effect is suppressed, in part, by antipsychotic drugs. Its abusive use may lead to an imbalance of neurotransmitters, especially dopamine and glutamate in relation to GABA, since ketamine does not compete for binding sites of glutamate, which can become a trigger for manic episodes. Assuming ketamine as a drug with promising and effective antidepressant effect from cascades by NMDA binding, it is possible to state that analogously to the effect of common antidepressants in BD individuals without associated use of mood stabilizer or atypical antipsychotics, ketamine would also be able to induce episodes of mania or psychosis in predisposed individuals. Certain doses of ketamine provide psychotic symptoms due to damage of cortical, limbic, thalamic and striatal neurons,

promoting dysfunction of glutamatergic neurotransmission. Studies have shown to be effective in inducing mania in rats with ketamine due to the oxidative stress caused by it. The pathophysiology of BD involves changes in antioxidant enzymes and induction of damage to lipids and proteins, suggesting that the oxidative stress caused by ketamine is a potential inducer of BD. Ketamine may increase the D2 receptor in the hippocampus, decrease the glutamatergic receptor in the frontal cortex, increase the dopamine transporter and serotonin in the striatum, hippocampus and frontal cortex, which emphasizes the theory of an experimental model of psychotic symptoms induced by ketamine. We report a case of a patient diagnosed as Bipolar Affective Disorder type I, according to CID-10 and DSM-V diagnostic criteria, after recreational use of ketamine. Methods: Information was collected from the patient's chart in the periods between 07/11/2015 to 07/24/2015 and 09/10/2016 to 09/30/2016, psychiatric anamnesis, psychic examination, physical and neurological examination, skull tomography and laboratory tests. The case was discussed based on literature review, through national and international scientific community databases. Objectives: To discuss the possible relationship between the recreational use of Ketamine and the course of Bipolar Affective Disorder. Results: The case presented in this report demonstrates new perspectives within the multifactorial theories that involve the etiology of Bipolar Affective Disorder as well as its relationship with the presentation and epidemiology of this, especially in relation to the increasingly frequent use of psychoactive substances by the general population. There's no previous case of ketamine-induced mania had been reported, demonstrating that further studies in this s

No. 207

Are There Differences in the Reproductive Health Between Women With Schizophrenia and Bipolar Disorders?

Poster Presenter: Maria Paz Garcia-Portilla
Lead Author: Julio Bobes, M.D., Ph.D.
Co-Authors: Lorena de la Fuente Tomás, Leticia Garcia-Alvarez, Leticia Gonzalez-Blanco, Angela Velasco, Pilar A. Sáiz

SUMMARY:
Introduction: Research on the reproductive health of women suffering from severe mental disorders (schizophrenia and bipolar disorder) has been scarce, and few studies compared pregnancy data of women with schizophrenia and bipolar disorder. In this poster, we present data from two naturalistic cohorts of women with schizophrenia and bipolar disorder recruited in Mental Health Centers of Oviedo, Spain. Methods: A total of 38 women with of schizophrenia and 61 women with bipolar disorders were included in this analysis. Inclusion criteria were: 1) age greater than 17 years, 2) diagnosis of schizophrenia or bipolar disorder according to DSM-IV-TR, 3) being under treatment in the MHC of Corredoria and Eria in Oviedo (Spain), and 4) written informed consent. All women belong to the cohort of schizophrenia and bipolar disorder of the Group 05 of Centro de Investigación Biomédica en Red de Salud Mental (CIBERSAM) from the Instituto de Salud Carlos III (Madrid, Spain). Data shown in this poster were collected directly from the patients. Results: 47.4% of women with schizophrenia had a history of pregnancy - 66.7% had one, 22.2% had two, and 11.1% three pregnancies – versus 65.6% of women with bipolar disorder - 20% had one, 55% two, 15% 3, and 10% had four pregnancies- ($p = 0.07$). Of these, 7 women with schizophrenia (39%) underwent voluntary termination of pregnancy (5 women 1 VTA, 1 woman 2, and 1 woman 3 VTAs) versus 6 women (15%) with bipolar disorder (5 women 1 VTA and 1 women 2) ($p = 0.043$). Two women with schizophrenia (11.1%) suffer a spontaneous abortus versus 10 (25%) with bipolar disorder (8 women 1 and 2 women 2) ($p > 0.05$). In total, only 10 women with schizophrenia (26.5% of the total sample) had children (8 women 1 child and 2 women 2) versus 39 women with bipolar disorder (63.9% of the total sample; 18 women 1 child, 17 women 2, 2 had 3 children, and 2 women had 4) ($p = 0.0002$). Women with schizophrenia were significantly younger at delivery compared to women with bipolar disorder (20.9 vs 25.3, $p = 0.009$). Conclusions: Women with schizophrenia underwent more frequently voluntary termination of pregnancy, had children in a lower proportion and at an earlier age than women with bipolar disorder.

No. 208

Validation of a Staging Model for Bipolar Disorder

Poster Presenter: Maria Paz Garcia-Portilla
Co-Authors: Lorena de la Fuente Tomás, Belén Arranz, Angela Velasco, Monica Sánchez, Ana García-Blanco, Pilar Sierra, Gemma Safont

SUMMARY:
Introduction. Clinical staging models are widely used in medical practice for personalizing treatments and helping clinicians with the decision-making process. Scientific literature notes that bipolar disorder (BD) is a progressive condition which would benefit from a staging model (1). Our research group has developed a comprehensive and empirical staging model for BD which includes 5 clinical stages. Here we present the validation of the model based on pharmacological treatment in which patients in late stages need a more complex pattern of pharmacological strategies. Methods: Two hundred and twenty-four subjects who met DSM-IV criteria for BD were included from 4 sites in Spain between January 2012 and December 2014. The subjects were classified according to an empirical staging model (excluding pharmacological treatment): 13 as stage I, 43 as stage II, 108 as stage III, 47 as stage IV, and 13 as stage V. Results: Patterns of pharmacological treatment differed among five stages ($p<0.007$): monotherapy was more frequent in stage I (30.8%), two or three drug combinations were more likely in stage II (69.8%), and stage III (33.3%), IV (27.6%) and V (46.2%) were more associated with combinations of four or more different drugs. Furthermore, there were statistically significant differences among five clinical stages in the use of antipsychotics ($p<0.005$), antidepressants ($p<0.032$), and benzodiazepines ($p<0.031$). Conclusions: This study showed evidence of construct validity of our BD staging model. The pattern of pharmacological treatment becomes more complex in the late stages of the disorder, with greater numbers and more types of drugs per patient compared to the early stages.

No. 209

The Gut Microbiome and Linkage to Brain Function in Patients With Bipolar Depression: A Preliminary Study

Poster Presenter: Yi Xu
Co-Author: Shaohua Hu, M.D., Ph.D.

SUMMARY:
Objective: The relationship between gut microbiome and mental health remains to be elucidated. The aim of current study is to 1) investigate the characteristics of gut microbiome and alterations following treatment in patients with bipolar depression patients, 2) evaluate the brain function and its correlation with the gut microbiome. Methods: Totally 36 patients with bipolar depression and 27 healthy controls were included in this study. The severity of depression was evaluated by Montgomery–Asberg Depression Rating Scale (MADRS). At baseline, the fecal sample was collected from all participants and analyzed with quantitative PCR technique. The immune function of all patients was assessed by examining the T lymphocyte subsets and cytokines. The brain function of all participants was assessed by near-infrared spectroscopy. All patients received a four-week quetiapine treatment (titrated up to 300 mg/d) for depression. After treatment, the fecal microbiome and immune profiles were reexamined in all patients. The brain-gut coefficient of balance (B-GCB), represented by the ratio of [oxy-Hb] to (B/E value) (B/E represented the microbial colonization resistance), was introduced to analyze the linkage and balance between gut microbiome and brain function. Results: At baseline of the BD group, the CD3+ and CD8+ T cell proportions were both positively correlated with log10 Enterobacter spp count ($r=0.477$, $p=0.004$; and $r=0.428$, $p=0.013$ respectively). The MADRS score was positively associated with the log10 Bifidobacteria count ($r=0.440$, $p=0.008$), and negatively associated with BMI ($r=-0.543$, $p=0.001$). Bacteroides–Prevotella group count was higher in males than in females ($p=0.026$). Log10 B-GCB was positively correlated with CD3+ T cell proportion ($r=0.540$, $p=0.038$). After a four-week treatment of quetiapine, MADRS scores were significantly decreased ($p<0.001$), and the Lactic acid bacteria count, Bifidobacteria count and B/E value were significantly increase (all using the logarithmic transformed value, $p=0.003$, 0.025, 0.020 respectively). Compared with HCs, the logarithmic transformed counts of Faecalibacterium prausnitzii, Bacteroides–Prevotella group, Eubacterium rectale, Atopobium Cluster and Enterobacter spp were significantly higher in BD

group ($p<0.001$, $p<0.001$, $p=0.004$, $p<0.001$, $p<0.001$). And the [oxy-Hb] of prefrontal cortex and the logarithmic transformed B/E value were significantly lower in BD group (both $p<0.001$). Conclusions: The composition and linkage of the gut microbiome and brain function was altered in bipolar patients, which may be related to the inflammatory process. Quetiapine treatment may also influence the gut microbiome in this population.

No. 210

Driving Performance of Bipolar Patients in an Automobile Simulator

Poster Presenter: Hasan Memon
Co-Authors: Zain Memon, Stacy Doumas

SUMMARY:

Background: Driver licensing authorities in many states across the United States have taken initiatives to necessitate a specialist opinion for individuals suffering from certain mental health conditions to provide an attestation to their fitness to drive, medical stability, and compliance with treatment. However for physicians there is no established national criteria to follow to help evaluate such patients with mental health conditions like Bipolar affective disorder and in addition there is also very little published data sets about the effect of Bipolar mood disorder on driving performance. Objective: To evaluate driving performance in individuals suffering from Bipolar Mood Disorder in their active phase of illness (n=10) (mania/depression/mixed) and in Bipolar patients who are in remission (n=10) compared to healthy controls (n=10) in an automobile simulator. Methods: Three groups comprising: 10 control participants, mean age 36 years, 50% male; 10 untreated Bipolar inpatients, mean age 26 years, 50% male; 10 treated (euthymic) Bipolar patients (all out patients), mean age 36 years,50% male. Driving tests were conducted in an automobile simulator with a standardized 60 minute driving protocol simulating a highway task, following a familiarization drive lasting 15 minutes. Driving performance was rated on as to driver's lane position variability (LPV=weaving) and crashes during the simulated drive, both expressed at every 10 minute intervals in the 60 minute total continuous drive time. Statistical analysis was by ANOVA using the SPS statistical package. Results: The results demonstrated greater LPV (more weaving) during the simulated drive in untreated Bipolar patients compared to treated patients and controls. There was increased LPV observed in euthymic bipolar patients versus controls but it was significantly less than the untreated bipolar patients. The difference in LPV in between the groups increased with the duration of the drive. A time on task effect occurred overall in every group i.e. LPV increased with increasing driving time during the 60 minute simulated drive. The data of four outliers whose LPV fell 2 Standard Deviation above or below the LPV mean for their group was excluded. There were no crashes observed. Conclusion: Untreated Bipolar affective disorder is associated with diminishment of driving ability in patients. While treatment may significantly improve driving performance in Bipolar Disorder patients there still may remain an increase LPV versus controls. Therefore physicians need a formal assessment criterion to evaluate patients with Bipolar Disorder to assist them in certifying their status with respect to driving ability. More studies are needed to help formulate such an assessment criteria and driving stimulator could serve as a useful tool to help evaluate patient's driving performance.

No. 211

Can Protein Kinase C Inhibitors Play a Role in the Treatment of Manic Symptoms?

Poster Presenter: Henrique Medeiros
Co-Author: Raquel Serrano

SUMMARY:

Background: Antimanic agents such as lithium, valproate and second-generation antipsychotics are recommended in the treatment of bipolar disorder (BD), although many patients do not tolerate these agents or do not respond adequately. In recent years, several lines of research have been focused on new antimanic agents. Recent studies suggest that the regulation of certain signaling pathways may be involved in the etiopathogenesis of BD. Particularly, abnormalities in the signaling pathway of protein kinase C (PKC) may be associated with manic symptoms. Thus, it is suggested that inhibition of PKC will have an antimanic effect. The authors intend to do a systematic review of the currently available literature regarding the role of PKC

inhibitors in the treatment of BD. Methods: Systematic review through literature research in MedLine, Pubmed, PsycInfo and Cochrane, using the keywords protein kinase C inhibitors, antimanic efficacy, bipolar disorder and the boolean operator AND, followed by the application of database-specific filters and eligibility criteria. Results: Currently, there is only one relatively selective PKC inhibitor that crosses the human blood-brain barrier, tamoxifen. While best known for its antiestrogen properties, tamoxifen is also a potent PKC inhibitor and its antimanic efficacy in the treatment of acute manic episodes has been evaluated in several clinical trials with positive results. Whether as monotherapy or as adjunctive therapy for mood stabilizers, the results suggest that this agent may be a potential treatment for the management of acute manic symptoms. However, these data have a short duration and small samples. These findings suggest that PKC may be an important molecular target for the development of innovative therapeutics. Conclusion: There is evidence suggesting that PKC inhibitors, namely tamoxifen, alone or as an adjunct treatment of mood stabilizers, may play a role in the treatment of acute manic symptoms. However, RCTs with longer treatment duration and larger sample size are needed, so that it can be considered as an option in the treatment of BD.

No. 212

Continuous Circular Cycling in Bipolar Disorder and Response to Long-Term Treatment: A Meta-Analysis

Poster Presenter: Antonio Tundo, M.D.
Co-Authors: Davide Gori, Paola Cavalieri

SUMMARY:

Background: About 30% of patients with bipolar disorders (BD) exhibit a continuous cycling course (CCC) with depression and (hypo)mania alternating without a free interval of at least 1 month. These patients significantly differ from those with non-continuous cycling course (N-CCC) on clinical presentation (age at onset, polarity at onset, polarity of recurrences, switch rates) and short-term response to antidepressants. Our aim is to compare the long-term treatment response in CCC and N-CCC bipolar patients through a meta-analysis of the available studies on this topic. Methods: The meta-analysis was based on the success rate difference (SRD) as an effect size measure. Heterogeneity of the effect sizes among the studies was analysed using the ?2-test. To account for heterogeneity of primary studies, aggregation of results was based on a random-effects model. Results: Six observational studies were identified including 671 patients (CCC 29.4%, N-CCC 70.6%.). The prophylactic treatment was lithium in 5 studies and lithium and/or anticonvulsant(s) augmented, if necessary, with an antidepressant and/or an antipsychotic in 1 study. The treatment duration was at least 2 years in 2 studies and at least 1 year in 4 studies. Overall, the response rate in CCC group was significantly lower than in N-CCC group (34.0% vs 49.3%; 0.001). After aggregation of effect sizes of the primary studies, a significant association between cycle pattern and response was found (SRD=-0.07, 95% CI -0.25, -0.09). The effect sizes in the meta-analysis were statistically homogeneous (=5.16, =0.40). Conclusions: Our findings indicate that patients with BD and CCC pattern of course are significantly poorer responder to long-term treatment compared with patients with BD and N-CCC pattern of course. This adds to existing evidence that patients with CCC significantly differ from those with N-CCC on socio-demographic, clinical and short-term antidepressant response and supports the hypothesis that the presence/absence of a free interval identifies two distinct subtypes of BD with distinctive genetic and/or biological features. This meta-analysis has limitations concerning: a) the small number and the observational nature of the studies; b) the heterogeneity of treatment duration; c) the heterogeneity and un-blinded nature of outcomes.

No. 213

Is There a Relationship Between Depression With Anxiety Distress *DSM-5* Specifier and Bipolarity?

Poster Presenter: Antonio Tundo, M.D.
Co-Authors: Laura Musetti, Rocco de Filippis, Claudia Del Grande, Valentina Falaschi, Luca Proietti, Liliana Dell'Osso

SUMMARY:

Background: In 2013 DSM-5 proposed the specifier “with anxious distress” (ADS) for major depressive episode (MDE) but the clinical implications of this specifier has been poorly studied. The aims of this

study were to estimate the prevalence of ADS in patients with major depressive disorder (MDD) and to determine if patients with ADS differ significantly from those without ADS on socio-demographic and clinical characteristics. Methods: The study included consecutive patients (aged 18-75 years) meeting DSM-5 criteria for MDD with a current MDE (DSM-5 criteria and Hamilton Depression Rating Scale (HDRS21) total score <14). Patients were assessed using Structured Clinical Interview for DSM-5 (diagnosis), Semi-structured Interview for Mood Disorders (socio-demographic and retrospective clinical data), Temperament Evaluation of Memphis, Pisa, Paris and San Diego (pre-morbid temperament), HDRS (depressive symptoms) Young Mania Rating Scale (Y-MRS) (manic symptoms), Clinical Global Impression of Severity (clinical status), and Global Assessment of Functioning (level of functioning).Comparisons between patients with and without ADS were conducted using chi-square or Fisher's exact test for categorical variables, t-test or Mann-Whitney test for continuous variables. Results: The study included 123 patients (63, 51% with ADS and 60, 49% without ADS). Compared with patients without ADS, those with ADS, had a higher number of manic symptoms at intake, as measured by Y-MRS (p=0.038), a higher rate of hypertimic temperament (p=0.025), of Generalized Anxiety Disorder (GAD) comorbidity (p=0.047), and of benzodiazepine abuse (p=0.047), and a lower rate of with melancholic features specifier (p=0.002). The two groups did not differ as regards the rate of family history for anxiety disorder (p= 0.164) and of anxious temperament (p=0.902). Conclusions: Our findings indicate that at least half patients with MDE meet criteria for the DSM-5 specifier with anxious distress. The lack of differences on anxiety disorders comorbidity, with the exception of GAD, on family history for anxiety disorder and on the rate of anxious temperament between patients with and without ADS suggest that anxious depression, as defined by DSM-5 specifier, is a specific sub-type of depression and not simply the result of the co-occurrence of an anxiety disorder or an anxious temperamental trait. A particular significant result of the present study is the potential relationship between ADS and bipolarity, as underlined by the high rate of hypertimic temperament, previous reported as marker of bipolarity, and by the at study entry. Further investigations are warranted to confirm the result of the present study.

No. 214

The Association of Resting Quantitative EEG Power With Inattention in Patients With Mood Disorder

Poster Presenter: Ji Hyun Baek

SUMMARY:

Abnormality in resting frontocetral quantitative EEG (in particular, beta and theta power) has been consistently reported in attention deficit and hyperactivity disorder. Recent study suggested this finding might be associated with the trait attentional control. In this study, we aimed to explore the association of quantitative EEG power with inattention in patients with mood disorder. A total of 35 subjects with mood disorder (15 subjects with major depressive disorder and 20 subjects with bipolar disorders) aged >18 years were included in the analysis. EEG recordings were collected during eyes closed conditions. Inattention symptoms were evaluated using the Adult ADHD self-report scale (ASRS). Depressive and anxiety symptoms were evaluated using Hamilton rating scale for depression (HAM-D) and the Hamilton rating scale for anxiety (HAMA). Hypomanic traits were evaluated using the mood disorder questionnaire (MDQ). Partial correlation analyses were conducted to explore the associations after adjusting for age and sex. ASRS inattention score showed negative associations with delta power at right (r=-0.468, p=0.032) and left frontal area (r=-0.475, p=0.030); theta wave at left frontal area (r=-0.479, p=0.028). ASRS hyperactivity score showed negative associations with delta power at rt. Frontal (r=-0.468, p=0.032) and lt. frontal (r=-0.507, p=0.019 and theta/beta ratio at rt. Frontal area (r=-0.429, p=0.050). No significant association was detected between the EEG variables and the mood symptoms. Frontal delta power, theta power and theta/beta ratio were negatively associated with inattention symptoms in mood disorders. Further study is needed to confirm the finding.

No. 215

The Effect of Manic, Depressive, and Anxiety Symptoms on Impulsivity in Patients With Mood Disorders

Poster Presenter: Ji Hyun Baek

SUMMARY:
Impulsivity is one of the common features observed in patients with mood disorders. Impulsivity has state characteristics which worsen during the acute episode. However, it is still unclear how much various dimensions of affective and anxiety symptoms contribute to the impulsivity. In this study, we aimed to determine the effect of manic, depressive and anxiety symptoms on the impulsivity measured using various methods in patients with mood disorders. A total of 30 subjects (10 subjects with major depressive disorder, 10 subjects with bipolar I and 10 subjects with bipolar II disorders) were included in the study. Impulsivity was measured using the Barrat impulsivity scale 11 (BIS-11), continuous performance test (CPT), go/no-go task and delayed discounting task. Manic, depressive and anxiety symptoms were evaluated using the Young mania rating scale (YMRS), Hamilton rating scale for depression (HAM-D) and the Hamilton rating scale for anxiety (HAMA). The effects of symptoms were evaluated using the multiple linear regression analyses after adjusting for age, sex and duration of illness. While manic side symptoms were not associated with BIS-11 score, HAMD and HAMA showed significant associations with BIS total score and BIS cognition score. In go/no-go task, YMRS score showed an association with error rate and reaction time. In delayed discounting task, HAMA score showed a significant association with the probabliity impulsivity. Manic, depressive and anxiety symptoms contribute to the impulsivity evaluated using various measures. Further study is needed to confirm the study findings.

No. 216
Epidemiology of Bipolar Spectrum Disorder: Results From the General Population Survey of South Korea
Poster Presenter: Sungman Chang
Co-Authors: Jungmin Woo, Sungwon Jung

SUMMARY:
Introduction: Patients with subthreshold bipolar disorder (Sub-BP) experience severe clinical courses and functional impairments which are comparable to those with bipolar I and II disorders (BP-I and -II). Nevertheless, lifetime prevalence, socioeconomic correlates and diagnostic overlaps of bipolar spectrum disorder (BPS) have not yet been estimated in the general population of South Korean adults. Aims: This study aimed to estimate the lifetime prevalence, correlates and diagnostic comorbidities of BPS using a validated screening instrument in the nationwide general population of South Korea. Methods: A total of 3013 adults among the 2011 Korean Epidemiologic Catchment Area survey (KECA-2011) completed face-to-face interviews using the Korean versions of the Composite International Diagnostic Interview 2.1 and Mood Disorder Questionnaire (K-CIDI and K-MDQ). Results: The lifetime prevalence of BPS in the South Korean adults was measured to be 4.3% (95% CI 2.6-6.9). Nearly 80% of the subjects with BPS were co-diagnosed with other DSM-IV non-psychotic mental disorders: 35.4% (95% CI 24.2-48.5) for major depression and dysthymic disorder, 35.1% (95% CI 27.7-43.3) for anxiety disorders, and 51.9% (95% CI 40.5-63.1) for alcohol and nicotine use disorders. Younger age (18-34 years) was the only sociodemographic predictor of BPS positivity (P=0.014), and the diagnostic overlap patterns were different between men and women. Conclusions: Positivity for BPS was estimated to be much greater than the prevalence of DSM-IV BP in South Korea. Most of the respondents with BPS were diagnosed with other major mental disorders and this might be related with mis- and/or under-diagnosis of clinically relevant Sub-BP.

Tuesday, May 08, 2018

Poster Session 7

No. 1
Harnessing Technology to Promote Behavior Change: An Innovative Approach to Teach Motivational Interviewing
Poster Presenter: Shilpa Srinivasan, M.D.
Co-Authors: Suzanne Hardeman, N.P., Matt Orr, Ph.D., Ashley Rippy, M.S., John E. Bragg, M.D.

SUMMARY:
Background: Psychiatrists play an integral role in promoting health and wellness while treating patients with mental illness and/or substance use disorders (SUD). Motivational Interviewing (MI), a

patient-centered, evidence-based approach to elicit behavior change, was originally developed as brief intervention for SUDs. It has since demonstrated clinical utility for health and wellness behaviors, such as diet and exercise engagement, conditions that are prevalent and important to address in patient care. MI training has been shown to improve psychiatry resident attitudes and skills in "engaging challenging patients", and aligns with ACGME core competencies of medical knowledge (MK), patient care (PC), professionalism (P), and interpersonal and communication skills (ICS). Yet MI is inconsistently incorporated into residency curricula. Method: Funded by the American Board of Psychiatry and Neurology Faculty Innovation in Education Award, a comprehensive, structured, and innovative online MI curriculum was developed to train PGY 2 residents. After completing online didactics asynchronously, residents observed and evaluated one faculty-conducted standardized patients (SP) interview using a skills assessment tool developed for this curriculum. This tool was also used to assess resident competency. Residents then performed an observed SP interview. Finally, residents completed an observed patient interview at their clinical sites. Faculty observed all MI interviews using HIPAA compliant videoconferencing technology (VCT) allowing real-time evaluation with immediate feedback to residents. The same faculty observed both resident interviews, ensuring consistency in evaluation and feedback, while VCT observation circumvented requirements for on-site faculty availability. Knowledge, Importance, and Confidence Surveys (KICS) were administered online at several points during the project to track outcomes and were revised based on item analysis and resident feedback. Two academic years of data were collected (2016 and 2017). Results: 12 PGY 2 psychiatry residents completed training (67% male, average age 28 years). Residents reported a median average of 5 hours of prior MI training but reported minimal MI use in prior clinical encounters. The following MI strategies were reported as least likely to be used prior to training: 1) verbal reinforcement of patient's strengths, abilities, or efforts to change his/her behavior; and 2) try to increase patient's awareness of discrepancy between where his/her life is currently versus where he/ she wants it to be in the future. Post-training KICS surveys revealed knowledge improvement (QI-based instrument changes were made in Y1). While confidence in MI skills improved after training in Y1, confidence declined in Y2 after SP interviews (pre-patient interview), highlighting concern that didactic training without skills practice and real-time feedback may lead to overestimation of self-reported confidence

No. 2

Game of Drugs: Teaching of Psychopharmacology to Psychiatry Residents

Poster Presenter: Amalia Martinez, M.D.
Co-Authors: Samir A. Sabbag, M.D., Vanessa L. Padilla, M.D., Lujain Alhajji, M.D., Mousa Botros, M.D.

SUMMARY:

Background: Enhancing psychopharmacology learning experiences during residency as well as implementing innovative teaching modalities during training has always been a skill of academic leaders in Psychiatry. Education in psychopharmacology is central to psychiatric practice though remains notoriously challenging to impart prescribing skills in a manner that engages trainees. Methods: Clinical educators, faculty members and residents collaborated to develop a Psychopharmacology lecture series for PGY2 residents at the Jackson Memorial Hospital/University of Miami Psychiatry Residency Program. The series entailed 10 weekly sessions, each led by a PGY2 resident and a faculty member using innovative teaching methods. Key topics in psychopharmacology were identified and each 60-minute session had a standardized structure including 5 Key Elements: pre-assigned background reading, Psychiatry Resident In-Training Examination (PRITE) review questions, a psychopharmacology presentation by a resident, a neuroscience discussion, and a clinically relevant case vignette presented by a faculty member with small group discussion. At the end of the lecture series, an online survey was distributed amongst residents to evaluate each of the 5 Key Elements and residents were asked to further rate each Key Element as Strong Recommendation, Moderate Recommendation, or Do Not Recommend. Results: The survey was completed by 85% (n=11) of the PGY2 class. The PRITE questions were rated very useful by 63.6% of residents, with 100% of residents

rating them moderately useful or above. The psychopharmacology presentation by the resident was rated very useful by 54.5% of residents. The clinical case presentation by faculty was rated very useful by 72.7% of residents. PRITE questions were strongly recommended by 100% of residents, the neuroscience module was strongly recommended by 63.6% of residents, the psychopharmacology presentation by resident was strongly recommended by 54.5% of residents, and the clinical case presentation by a faculty member was strongly recommended by 81.8% of residents. Conclusion: When designing psychopharmacology lectures for psychiatry trainees, elements that are strongly recommended are: PRITE review questions, case vignettes by faculty members, neuroscience content, and presentations by residents. Background readings distributed prior to class were moderately accepted and can be optional when designing the lectures. We are presently conducting the second phase of the psychopharmacology module, teaching the current PGY2 class. Our goal is to obtain results from their survey for further analyses. Our next steps include looking at PGY2's performance in the psychopharmacology section of the PRITE, and assess if this intervention was impactful. We believe the approach to teaching psychopharmacology needs to be an integrative, transdiagnostic and clinically relevant experience for it to be fruitful to both residents and educators.

No. 3

Poor Sleep Quality, Positive Personal Characteristics, and Changes in Smartphone Addictive Behaviors in College Students

Poster Presenter: HyeJin Kim
Co-Authors: Jin-Young Min, Kyoung-Bok Min

SUMMARY:
Background: Poor sleep quality is associated with smartphone addiction. Positive personal characteristics were inter-related with sleep quality and moderate addictive behaviors. This prospective study investigated whether sleep quality is associated with changes in smartphone addictive behaviors and if an association exists, whether the positive personal characteristics (i.e., self-control and self-esteem) have modified this association. Methods: We conducted an online survey of 608 college students and then a follow-up survey 10 months later. This follow-up rate was 52.3% (n = 318). Participants completed self-reported questionnaires on socio-demographics, and Pittsburgh Sleep Quality Index, Brief Self-Control Scale, Rosenberg Self-Esteem Scale, and Smartphone Addiction Proneness Scale. We classified participants into four groups according to changes in their smartphone use: normal->normal, addiction->normal, normal->addiction, and addiction->addiction. Results: Participants with poor sleep disorder were more likely to be smartphone addicts in the second flow [Odds ratio (OR) = 2.16, 95% confidence interval (CI): 1.29-3.86], to have changed from normal to addictive status (normal->addiction; OR = 2.88, 95% CI: 1.17-7.12), or to have maintained their addictive status (addiction->addiction; OR = 2.91, 95% CI: 1.49-5.67). Participates with a lower level of self-control and self-esteem, the association between sleep disorder and smartphone addiction in the second flow were found to be significant: normal->addiction (OR = 4.48, 95% CI: 1.35-14.88) and addiction->addiction (OR = 2.91, 95% CI: 1.49-5.67). Conclusion: Poor sleep disorder was significantly associated with emerging and maintained smartphone addictive behavior. High self-control and self-esteem may play a protective role in students' smartphone addiction.

No. 4

WITHDRAWN

No. 5

Alterations of Regional Cerebral Blood Flow After NMDA Receptor Antagonist Administration in Patients With Alcohol-Related Dementia

Poster Presenter: Younghoon Chon, M.D.

SUMMARY:
Although N-methyl-D-aspartate (NMDA) receptor antagonists may have beneficial influences on cognition in patients with alcohol-related dementia (ARD), their effects on regional cerebral blood flow (rCBF) remain unknown. This study evaluated changes in rCBF in ARD patients after administration of NMDA receptor antagonist for 12 weeks using technetium-99m ethyl cysteinate dimer (Tc-99m ECD) singlephoton emission computed tomography (SPECT). Twenty-eight ARD patients were

administered memantine for 12 weeks and underwent clinical evaluations and brain SPECT scans at baseline and follow-up. Whole-brain changes in perfusion were examined on a voxel-by-voxel basis. At follow-up, the patients showed reduced rCBF in the left medial frontal gyrus, left cingulate gyrus, left claustrum, right brainstem, left superior temporal gyrus, bilateral fusiform gyrus, and left cerebellum. On the other hand, increased rCBF was found in the bilateral uncus, left parahippocampal gyrus, bilateral superior frontal gyrus, right inferior parietal lobule, left cuneus, and left superior temporal gyrus. Perfusion increases in various brain areas including the superior frontal, parahippocampal, and inferior parietal areas, which may play important roles in the pathophysiology of ARD, suggest potential benefits of NMDA receptor antagonists on brain functions in patients with ARD.
KEYWORDS: alcohol-related dementia, NMDA receptor antagonist, regional cerebral blood flow, SPECT

No. 6

An Automated Telehealth System for Integration of Substance Abuse Preventative Services

Poster Presenter: Akua Nuako
Co-Authors: Brian Ho, Jordan Feltes

SUMMARY:
Opioid use is a rapidly growing crisis in the US; drug overdoses have become the leading cause of death of Americans under 50. It is imperative that innovative solutions that help scale prevention and recovery programs in a resource efficient manner are developed. Studies have shown mobile health technologies to be effective for cessation of certain substance abuse behaviors, such as tobacco smoking and alcohol use. However, few mobile health interventions have been developed for opioid and other substance use. As a result, we have developed an automated mobile text and phone call based intervention called EpxSubstanceUse (EpxSU) to integrate into existing care management systems for substance use. EpxSU was developed in partnership with Behavioral Health Network of St. Louis (BHN). Our goal was to monitor substance use behaviors and connect patients to care managers and community programs in a more resource-efficient manner. Patients receive daily text prompts to assess their use behaviors and urges to use. EpxSU also asks about participation in peer support groups, which has been proven to help in the recovery of many users. For patients in need, care managers are instantly alerted and can then easily set up appointments and phone calls. Positive feedback and messages are given to patients who maintain healthy behaviors. Twenty one patients were enrolled in our EpxSU pilot. Throughout our selected period of study (15 weeks), we observe an engagement rate of over 60% over more than three months and have seen substance use behavior decrease during this interval. The percentage of clean patients also increased during this interval. We also polled patients about their relationship to their provider; they indicated an excellent quality of care (average score of 8.6 with a scale of 1-terrible; 9-excellent) and a moderate improvement in communication (average score of 6 with a scale of 1-worsened; 5-no change; 9-improved greatly) due to the service. Each patient/year traditionally costs the program an estimated $926. When analyzing return on investment for implementation of Epharmix, it is estimated that the service replaces on average 15 minutes of “check-in” time per client/week. Staff average around 30 clients each, which amounts to 450 minutes (7.5 hours) per week that auto-texting covers. Given a 40 hour work week, time savings allows for a 23% increase in client load per staff member or $173 savings per patient/year. Using a mobile health platform that seamlessly connects patients, physicians, care providers, peer support groups, and help lines allows services to be provided in a more effective and timely manner. While more studies are needed to study the efficacy of this program, we believe that mobile health interventions warrant more discussion as an idea in bridging the gap between local community opioid recovery programs and large scalable solutions to a growing national opioid crisis.

No. 7

Sleep Quality, Anxiety, and Depression Scores as Predictors of Success in Veterans Replacing Tobacco Smoking With Electronic Cigarettes

Poster Presenter: Andrea Guerrero
Co-Authors: Michael Schweitzer, Kira Balestrini, Landy Luna, Gregory Holt, Mehdi Mirsaeidi, Mathias Salathe

SUMMARY:
Background: Electronic cigarettes (ECs) are thought to reduce the known toxicity of tobacco cigarette (TC), providing smokers an alternative source of nicotine. ECs are being evaluated as smoking cessation tools and major physician groups recommend them for smoking cessation with a risk reduction approach in mind. It is important to identify the characteristics of subjects who successfully replace TC with EC to better understand who is a potential candidate for smoking cessation using an EC strategy. However, there are currently no good predictors for success or failure of this approach. In this study, designed to explore what predicts the success to replace TC with EC, we compared sleep quality, anxiety and depression scores of veterans who were and were not successful in replacing TC with EC. Methods: Active smokers were enrolled in an ongoing TC to EC replacement trial at the Miami VA. Subjects were given 4 weeks to transition to vaping a fourth-generation EC and were then followed for an additional 12 weeks while using EC exclusively. Subjects who could not make the switch to ECs were put into the failure group (FG) and those who achieved and maintained replacement were put into success group (SG). Sleep quality, anxiety and depression scores were assed with the Pittsburgh Sleep Quality Index (PSQI), Beck Anxiety Inventory (BAI), Beck Depression Inventory (BDI) and Hospital Anxiety and Depression Scale (HADS). Abstinence from TC smoking was monitored weekly with exhaled carbon monoxide (CO) and venous carboxyhemoglobin measurements. Results: Of 44 subjects enrolled, sixteen subjects successfully changed from TC to EC for the first 4 weeks (36.4%) and 8 of them (18.1%) successfully switched from TC to EC for the full 16 weeks of the study. BAI [7 (0.75-13.75), 7 (0.5-25) p=0.96], BDI [4.5 (0.25-22.5), 10.5 (0-30.7) p=1.00] and HADS [8 (3-9), 3.5 (0.5-12.5) p=0.86; 3 (1-9), 3.5 (0-14) p=1.00)] scores did not differ between FG and SG. We did not observe significant differences in age (59 vs 56.3 years), race distribution, and TC pack-years (54.2 vs 43.2) between the FG and SG, respectively. Similarly, scores of nicotine dependence did not differ. Conclusion: We cannot identify specific baseline subject characteristics that predict who will successfully replace TC with EC. Since this is a small sample, additional analyses will be performed with more enrolled subjects.

No. 8

Relationship of Borderline Personality Symptoms With ADHD Symptoms, Aggression, and Impulsivity in Patients With Substance Use Disorder

Poster Presenter: Cuneyt Evren, M.D.
Co-Authors: Ozlem Carkci, M.D., Gokhan Umut, M.D., Bilge Evren, M.D.

SUMMARY:
Objective: The aim of the present study was to evaluate relationship of borderline personality symptoms (BPS) with severity of attention deficit hyperactivity disorder (ADHD) symptoms, aggression and impulsivity in a sample of patients with alcohol use disorder (AUD) or heroin use disorder (HUD). Method: Participants included 98 patients with alcohol use disorder and 60 patients with heroin use disorder. Participants were evaluated with the Adult ADHD Self-Report Scale (ASRS-v1.1), the Borderline Personality Inventory (BPI), the Buss-Perry Aggression Questionnaire (BPAQ) and the Short Form of Barratt Impulsiveness Scale (BIS-11-SF). Results: Age was lower, whereas rate of being single and unemployed were higher among those with the HUD than those with AUD. Duration of education and scale scores did not differ between the groups, only exception was that verbal aggression was higher in patients with AUD. ADHD, BPI, aggression and impulsivity scores were mildly to moderately correlated with each other. In linear regression analysis, severity of ADHD symptoms, both severity of innattentiveness (IN) and hyperactivity/impulsivity (HI) symptoms, were related with severity of BPS together with motor impulsivity and hostility. Conclusion: These findings suggest that the severity of ADHD symptoms (both IN and HI dimensions) is related with severity of BPS, while motor impulsivity and hostility may be partial mediators on this relationship among patients with substance use disorder.

No. 9

Suicide Attempt History, Borderline Personality Disorder, Aggression, Impulsivity, and Self-Mutialtive Behavior in Substance Use Disorder

Poster Presenter: Cuneyt Evren, M.D.
Co-Authors: Ozlem Carkci, M.D., Gokhan Umut, M.D., Bilge Evren, M.D.

SUMMARY:
Objective: The aim of the present study was to evaluate relationship of lifetime suicide attempt (LSA) with borderline personality disorder (BPD), aggression, impulsivity and self-mutilative behaviour (SMB) in a sample of patients with substance use disorder (SUD). Method: Participants included 132 patients with alcohol or heroin use disorder. Participants were evaluated with the Buss-Perry Aggression Questionnaire (BPAQ), the Short Form of Barratt Impulsiveness Scale (BIS-11-SF) and Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II) for BPD. Results: Age was lower in the group with LSA history (n=52, 39.4%) than those without (n=80, 60.6%), whereas duration of education, alcohol or heroin use disorder, marital and employment status did not differed between the groups. Rates of BPD and SMB, aggression and impulsivity scores were higher among those with LSA history. In linear regression analysis, although BPD predicted LSA together with anger and non-planning impulsivity, when SMB was included in the analysis BPD was no longer a predictor, whereas SMB predicted the LSA together with anger and non-planning impulsivity. Conclusion: While BPD and LSA is related, SMB seems to be mediator effect on this relationship. Also anger and non-planning impulsivity may have partial mediator effect on the relationship between BPD and LSA among patients with SUD.

No. 10
Relationship of Probable ADHD With Severity of the Internet Addiction, Neuroticism, and Extraversion
Poster Presenter: Bilge Evren, M.D.
Co-Authors: Cuneyt Evren, M.D., Ercan Dalbudak, M.D., Merve Topcu, Ph.D., Nilay Kutlu, Psy.D.

SUMMARY:
Objective: The aim of the present study was to evaluate relationship of probable attention deficit hyperactivity disorder (ADHD) with severity of the Internet addiction (IA), neuroticism and extraversion. Method: The study was conducted with online survey among 457 volunteered university students in Ankara and people who play games on the Internet and who are in the e-mail database of a company located in Istanbul that organizes e-sports tournaments. Participants were evaluated by applying the Adult ADHD Self-Report Scale (ASRS-v1.1), the Young's Internet Addiction Test-Short Form (YIAT-SF) and the Eysenck Personality Questionnaire Revised-Abbreviated Form (EPQR-A). Results: Age was lower among those with the probable ADHD (n=102, 22.3%) and those without (n=355, 77.7%). Gender, educational status and type of the participants did not differed between the groups. Severity of internet addiction and neuroticism were higher among those with the probable ADHD, whereas extraversion was lower. ADHD scores were midly correlated with other scale scores. In MANCOVA, additional to low extraversion and high neuroticism, severity of Internet addiction was related with both innattentiveness (IN) and hyperactivity/impulsivity (HI) dimensions. Conclusion: These findings suggest that the severity of IA is related with the severity of ADHD dimensions, whereas low extraversion and high neuroticism may have partial mediator effect on this relationship.

No. 11
Relationship of Probable ADHD With Severity of Aggression and Impulsivity in a Sample of Patients With Substance Use Disorder
Poster Presenter: Bilge Evren, M.D.
Co-Authors: Cuneyt Evren, M.D., Ozlem Carkci, M.D., Gokhan Umut, M.D.

SUMMARY:
Objective: The aim of the present study was to evaluate relationship of probable attention deficit hyperactivity disorder (ADHD) with severity of aggression and the mediator effect of impulsivity on this relationship in a sample of patients with substance use disorder. Method: Participants included 236 patients with heroin use disorder. Participants were evaluated with the Adult ADHD Self-Report Scale (ASRS-v1.1), the Buss-Perry Aggression Questionnaire (BPAQ) and the Short Form of Barratt Impulsiveness Scale (BIS-11-SF). Results: Age, duration of education, marital and employment status did not differed between those with the probable ADHD (n=34, 28.8%) and those

without (n=98, 74.2%). Aggression and impulsivity scores were higher among those with the probable ADHD. ADHD scores were midly correlated with aggression scores, and moderately correlated with impulsivity scores. In logistic regression analysis, non-planning and attentional impulsivity predicted the probable ADHD together with hostility. In MANCOVA non-planning and attentional impulsivity were related with both innattentiveness (IN) and hyperactivity/impulsivity (HI) dimensions, hostility was only related with IN significantly, but not with HI. Conclusion: These findings suggest that the severity of both non-planning and attentional impulsivity are partial mediators on the relationship between the probable ADHD and hostility among patients with substance use disorder.

No. 12
WITHDRAWN

No. 13
Tobacco Use and Nicotine Replacement Therapy in the Mount Sinai Beth Israel Dual Diagnosis Unit
Poster Presenter: Anjali Dhanda

SUMMARY:
BACKGROUND Tobacco use disorder is considered a mental disorder in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). Furthermore those with mental illness tend to smoke more heavily, smoke for a greater number of years, and prefer the taste of higher tar cigarettes compared to smokers in the general population. Prevalence for tobacco use disorder holds at about 50% for this population despite significant public efforts to promote smoking cessation. Smoking-related morbidity and mortality is highly prevalent in people with severe mental illness contributing to half of all deaths. In New York, the Office of Alcohol and Substance Abuse Services has mandated that all facilities that treat substance use disorders must be tobacco free and offer treatment for tobacco use disorder. Acute nicotine deprivation and withdrawal in smokers has been shown to increase agitation, and this effect is more pronounced in individuals with higher baseline irritability or hostility. Nicotine replacement therapy (NRT) is a safe and effective pharmacological intervention for smoking cessation and withdrawal. Educating the patients on the problems associated with tobacco use and providing them with pharmacotherapies is essential in helping them refrain from smoking. OBJECTIVES To establish the prevalence of smokers on an inpatient Dual Diagnosis unit treating individuals with both severe mental illness and substance use disorders. Also to establish associated diagnoses, the extent and dosing of NRT use, and NRT preference. METHODS This is a retrospective, de-identified systematic chart review looking at inpatients admitted to a Dual Diagnosis unit from January 1, 2017to June 30, 2017. It is being conducted at Mount Sinai Beth Israel (MSBI) Dual Diagnosis unit. Every patient over the age of 18 who was admitted to the unit is eligible. A one-way analysis of variance (ANOVA) will be used to analyze the data. RESULTS Results will be available by the time this poster is presented. We will be able to determine the following: percentage of patients who are smokers, associated diagnoses, percentage that received any form of NRT, type and dosage of NRT used, and percentage discharged with a prescription of NRT. CONCLUSION NRT is significantly more effective than placebo in aiding abstinence from smoking and decreasing agitation resulting from acute tobacco abstinence. Through this information we will be able to make further recommendations on use of NRT on inpatient psychiatric units.

No. 14
Understanding the Potential Benefits of Diversion and Non-Prescribed Use of Buprenorphine in the United States
Poster Presenter: Hoi Yee Annie Lo
Co-Author: Brian Licht

SUMMARY:
BACKGROUND: North America is experiencing an opioid epidemic with more than half a million overdose deaths reported from 2000 to 2015 by the CDC.The use of medication assisted treatments (MAT) for opioid use disorders (OUD), such as buprenorphine (BUP), have rapidly expanded in the past years. This increase in availability of MAT in the United States raises concerns for diversion and misuse, resulting in harsh regulations of BUP distribution and the development of different BUP formulations. Unfortunately, little improvement on diversion of MAT medications have been

demonstrated despite intensive efforts from different countries. Therefore, it is important to consider the implications and motivations of diversion and non-prescribed use in this population. This review aims to further understand public health implications and motivations behind diversion, misuse and non-prescribed use of BUP in the United States. METHODS: A literature review was performed using PubMed from inception to September 2017 for randomized controlled trials, observational cohort studies and case series that discussed evidence on the diversion and misuse associated with BUP. RESULTS: Multiple studies on the attitudes and motivation of BUP diversion revealed that diversion occurred mainly as a means to help friend(s) overcome withdrawal symptoms and to support ongoing illicit drug use. However, selling BUP has not been shown to be the primary source of income for most opioid addicted individuals (OAI). Non-prescribed BUP use was more likely to be for therapeutic purposes, than for experiencing euphoria. Diverted BUP is rarely preferred to other opiates and is often used to treat withdrawal, psychiatric illness or detox with the intent to remain abstinent. Due to it's high affinity and low mu-receptor activity, diverted BUP may be protective from overdose from other opioids, with recent report showing BUP's ability to reverse overdose from full mu-agonist. Furthermore, a study conducted in Baltimore on MAT treatment retention found that OAI with prior non-prescribed BUP use were significantly more likely to remain in MAT through 6 months than their BU P naive counterparts. CONCLUSION: Our preliminary review found that not only is diversion and sharing of BUP a normative behavior of OAIs, but is also seen as a moral good especially when used to help a friend suffering from withdrawal symptoms. Prior illicit BUP use was associated with increased perceived effectiveness of the medication, which further increases the likelihood of an OAI to seek MAT and stay in treatment. Since BUP implementation into MAT programs has significantly reduced heroin overdose deaths, it is likely that BUP diversion can result in a harm reduction effect, by protecting people from overdosing on fatal substances, such as heroin. Further investigation of BUP diversion as a harm reduction measure in reducing opioid-overdose deaths is warranted.

No. 15

The Role of Cyfip1 in Locomotor Responses to Cocaine

Poster Presenter: Asna Tasleem
Co-Authors: Ozlem Gunal, Deanna Benson, Kavita Prasad, Azadeh Tafreshi, Georgia Barbayannis

SUMMARY:

Background: Repeated exposure to addictive drugs such as cocaine produces persistent changes in synaptic structure, function and plasticity that results in addiction. New evidence on genetic factors can help elucidate the response to addictive drugs. Recently cytoplasmic FMR1-interacting protein (Cyfip)-2 was identified as a key regulator of locomotor responses to cocaine in mice (Kumar et al., 2013). Cyfip-2 and Cyfip-1, a closely related family member, function to repress protein translation through binding interactions with FMRP as well as to regulate actin cytoskeleton assembly as a component of WAVE regulatory complex. Both actions are implicated in cocaine responses. We have previously shown that mice carrying a Cyfip1 mutation (Cyfip1+/-) show protein synthesis-independent enhanced mGluR-LTD in the hippocampus in adulthood, and Rac1-dependent enhanced presynaptic function during development. Methods: To test our hypothesis that cocaine responses are affected when Cyfip1 levels are reduced, we performed open field tests and measured and compared locomotor activity in control conditions and in response to cocaine by using an automated video tracking system. We tested both male and female, young adult Cyfip1+/- and wild type mice for locomotor responses to cocaine following intraperitoneal injection with saline for 3 days, and cocaine (15mg/kg) for 7 days. Velocity (mm/min) was measured during baseline and after 15 mg/kg cocaine or saline injection, for 45 min. The mice were euthanized and the brains processed for immunofluorescence for synaptic proteins. Results: Our preliminary data showed that wild type mice displayed an increased locomotor response to the administration of cocaine (15mg/kg), whereas, Cyfip1+/- mice showed a weaker response to cocaine as compared with wild type mice. It has been shown that increased GluN2B-containing NMDA receptor (NMDAR) levels are

associated with the cocaine response in wild type NAc (Brown et al., 2011). Our additional preliminary data show that GluN2B levels are higher than wild type mice in the hippocampus from Cyfip1 deficient mice under baseline conditions. We are currently confirming these NMDAR subunit changes in NAc, before and after cocaine sensitization in Cyfip1 deficient animals. Conclusions: These findings provide a novel cellular mechanism that may contribute to cocaine-induced behavioral alterations. This study was supported by Rutgers NJMS and NIMH.

No. 16

Effect of Marijuana in the Adolescent and Effects of Their Life

Poster Presenter: Thersilla Oberbarnscheidt, M.D., Ph.D.

SUMMARY:

Marijuana is the most commonly used illicit substance in the United States and worldwide. The smoking of marijuana is an increasingly observed phenomenon in the adolescent population and even more common nowadays than cigarette smoking. A special focus should therefore aim to the effects of marijuana in that particular age group. Adolescents are particularly vulnerable to the effects of marijuana because their brain and neuro-circuits are still developing. The exposure of marijuana to the still pruning brain causes not only short-term cognitive impairment but also permanent, life-long reduction in their cognitive abilities. This is due to marijuana's effect on processing speed and a reduction in gray matter in several brain regions as well as a decrease in white matter. Marijuana is viewed as a "gateway" drug and more so than adults, the adolescents are at higher risk to develop a subsequent drug addiction after the exposure to marijuana. A positive correlation between the age of first exposure to marijuana and the development for an addiction to other drugs has been shown. There is also a strong association between the onset of other psychiatric disorders, for example bipolar disorder, psychosis, depression and anxiety and even suicidal ideations in context with the use of marijuana. This poster is a systematic literature review of the current scientific data regarding the indications, toxic effects and pathological evidence from the use of marijuana in the adolescents.

No. 17

Prescription Opioids and Addiction

Poster Presenter: Thersilla Oberbarnscheidt, M.D., Ph.D.

SUMMARY:

Why do physicians continue to prescribe opioid medications despite widespread psychiatric morbidity and mortality. Prescription opioid addiction with its loss of control over use is the short answer. Relative to programs to limit misuse and diversion of opioid medications, consideration of the risk of addiction in pain treatment has been muted. We have moved beyond questions of problematic use and diversion to focus on the role of opioids in causing addiction even when prescribed and used appropriately. The inordinate and massive prescribing and use of opioid drugs in the United States reflects addictive use and does not correlate to the magnitude of pain conditions. The United States constitutes only 4.6% of the world population; however, it consumes 80% of the world's opioid supply and 99% of the world's hydrocodone supply. Retail sales that use opioid medications, including methadone, oxycodone, fentanyl-based hydromorphone, hydrocodone, morphine, meperidine, and codeine, have increased from a total of 50.7 million grams in 1997 to 126.5 million grams in 2007.2 This is an overall increase of 149%, and 222% for morphine, 280% for hydrocodone, 319% for hydromorphone, 525% for fentanyl-based drugs, 866% for hydrocodone, and 1,029% for methadone. New surveys of opioid medications and mortality show a steadily rising rate of unintentional deaths due to prescription and therapeutic use of opioid medications. The overall increase in opioid use refects increased availability and, therefore, onset of addictive use in vulnerable populations (eg, those who complain of pain). This poster summarizes the inherent addictive pharmacologic properties that are the impetus and basis for America's current opioid epidemic.

No. 18

Marijuana: Violence and the Law

Poster Presenter: Thersilla Oberbarnscheidt, M.D.,

Ph.D.

SUMMARY:
Marijuana is currently a growing risk to the public in the United States. Following expanding public opinion that marijuana provides little risk to health, state and federal legislatures have begun changing laws that will significantly increase accessibility of marijuana. Greater marijuana accessibility, resulting in more use, will lead to increased health risks in all demographic categories across the country. Violence is a well-publicized, prominent risk from the more potent, current marijuana available. We present cases that are highly popularized storylines in which marijuana led to unnecessary violence, health risks, and, in many cases, both. Through the analysis of these cases, we will identify the adverse effects of marijuana use and the role it played in the tragic outcomes in these and other instances. In the analysis of these cases, we found marijuana as the single most common, correlative variable in otherwise diverse populations and circumstances surrounding the association of violence and marijuana.

No. 19
Opioid-Induced Hyperalgesia: A Growing Problem in Our Society
Poster Presenter: Thersilla Oberbarnscheidt, M.D., Ph.D.

SUMMARY:
Opioid-induced hyperalgesia (OIH) is a very common consequence of pain management with opiods. Characteristics of OIH are worsening pain over time despite an increased dose of the opioid. It is often recognized neither by the physician nor the patient, and it results in increasing doses of opioid medications and continued unsatisfying pain levels experienced by the patient. The increased use of narcotics has a negative impact on patient outcome, as patients sufer from increased pain levels and often develop depression. Patients with OIH require frequent assessment for aberrant behaviors as an indicator of addictive use. Opioid-seeking behavior may complicate the clinical picture of failed opioid therapy. The treatment of OIH is to discontinue the opioid medication and to treat the patient's withdrawal symptoms, if necessary, in an inpatient setting with medical monitoring.

No. 20
Applying a Cox Hazards Model Uncovers Risk Factors for Accelerated Relapse in Patients With Concomitant Substance Abuse and Mood Disorders
Poster Presenter: Mike Wang

SUMMARY:
Background: Substance Use Disorders (SUD) in individuals with affective disorders is higher than the general population. Even after completing detoxification programs, dual-diagnosis patients are frequently liable to relapse, increasing undue economic and patient burden. Understanding clinical and social characteristics of patients at the time of their hospitalization which predict relapse susceptibility would aid in the development of better preventative health initiatives, as well as optimized healthcare for this patient population. Objectives: Retrospectively examine underlying risk factors ascertained at hospitalization for treatment of patients with SUD and affective disorders, that predict time-to-relapse (TTR) following discharge from the dual diagnosis service in the Johns Hopkins Intensive Treatment Unit. Methods: A retrospective cohort study of 76 patients admitted to the Johns Hopkins Intensive Treatment Unit (JHH-ITU) with dual-diagnoses SUD and affective disorders had their histories coded dichotomously for 42 risk factors, encompassing social, genetic, psychiatric, and organic factors. Psychiatric evaluations from treatment in the JHH-ITU, as well as a statewide health information exchange record were used for identification of TTR and risk factors. These risk profiles were subject to a Cox regression risk analysis. Additionally, costs incurred per patient were examined pre and post admission to calculate average costs saved from successful ITU treatment. Results: Patients using benzodiazepines, those initially presenting to the Emergency Department (versus direct admission via community nurse evaluation) and those who had undergone multiple detoxification programs, all experienced shorter TTR. Increased TTR correlates with prior intravenous opiate use and polysubstance use. Consistent with prior published studies, age, sex, education level, job or marital status, number of dependents and

stressful events were not significantly predictive of TTR. While length of stay in the JHH-ITU was not significantly predictive of TTR, an ITU treatment tailored to those with concomitant drug abuse proved successful in reducing drug use and hospital admissions after discharge, particularly for intravenous and polysubstance drug users. Conclusion: Emergency department admission, participation in multiple detoxification programs, and benzodiazepine abuse proved significantly predictive of reduced TTR. Further studies are required to determine strength and association of intravenous and polysubstance drug use with increased TTR. Economic data will be presented about cost effectiveness of treatment, broken down by specific constellations of medical, psychiatric and social characteristics.

No. 21

Validation of the Novel Automated Mobile Mood Tracking Technology Mood 24/7.com

Poster Presenter: Anupama Kumar

Co-Author: Cody Benoit

SUMMARY:

Background: Psychiatrists typically monitor quantitative changes in the moods of their patients through patient retrospective mood recall at an office visit and/or by requesting their patients maintain a handwritten mood diary. These methods have extremely low accuracy and adherance rates, respectively. Mood 24/7 is an SMS-based, automated, daily mood monitoring system developed to accurately and efficiently track mood over time. It is a web-based technology that allows patients to track their mood through daily texts that are stored in real time in mobile electronic diaries that can be shared by the patient with friends, family members and physicians. Objective: Assess the accuracy and validity of Mood 24/7 in the outpatient psychiatric setting. Methods: The Study population comprised of consecutively encountered outpatient cohort of individuals with a diagnosis of major depressive disorder who initially presented at the Johns Hopkins Hospital in one of our (AK) outpatient practices. A retrospective electronic chart review was performed to compare patient's self-reported Mood 24/7 daily mood ratings with their psychiatrist's blinded clinical mood assessment at the time of the patient's visit, and their score on the standardized depression assessment component of the revised Symptom Checklist (SCL-90-R) which was administered at their initial intake. Pearson correlations were conducted between Mood 24/7 Ratings, Clinician Mood Ratings, and SCL-90-R Depression Scores. Results: Patients' (n=15) daily mood scores on Mood 24/7 on the day of their psychiatric consultation significantly correlated with psychiatrist mood rating ($P = 0.003$, $R = 0.705$) and depression subscale on the standardized SCL-90-R assessment ($P = 0.02$, $R = 0.587$). Significant correlations were observed between 6 of the 13 total SCL-90-R items and Mood 24/7 scores and/or Clinician Mood Ratings. In a sub-cohort of these patients (n=9), Clinician Mood Ratings and Mood 24/7 data were collected across time, and strong correlations were observed between the psychiatrist's blinded assessment of the patient's mood at the patient's outpatient appointments and Mood 24/7 data ($P < 0.001$). Patient adherence was 90% with the Mood247 tests over time. Conclusions: Mood 24/7 is a reliable and valid tool that accurately tracks mood in the outpatient psychiatric setting.

No. 22

Historical, Clinical, and Public Health Considerations of "Bath Salt" Use: An Emerging Drug of Abuse

Poster Presenter: Anees Bahji, M.D.

SUMMARY:

Synthetic cathinones, or 'bath salts', are a heterogeneous group of novel psychoactive substances (NPS) that have recently joined the illicit drug scene. Once considered a 'legal high', recent drug legislation has rendered 'bath salt' use illegal in many countries, reflecting their high potential for abuse and dependence. Synthetic cathinones, such as mephedrone and MDPV, increase the concentration of monoamines in the synaptic cleft, leading to their stimulant and empathogenic effects, but their use can also lead to psychosis and multiple medical sequelae. Because clinicians are relatively unfamiliar with NPS and since diagnostic testing for 'bath salts' is not routinely available, synthetic cathinone abuse presents a significant challenge for clinicians. The current trend in the management of synthetic cathinone intoxication is that of supportive care and symptom- driven treatments. The long-

term consequences of synthetic cathinone use remain unclear, but they likely include various medical and psychiatric sequelae. As newer forms of NPS enter the illicit drug scene, increased public health efforts are required to address the NPS crisis, which should focus on increasing education and awareness of NPS use and its consequences to at-risk populations.

No. 23
Attitudes to Antipsychotics
Poster Presenter: Anees Bahji, M.D.

SUMMARY:
Objective: to identify training needs of current psychiatry residents regarding the prescribing of first-generation antipsychotics (FGAs), long-acting injectable antipsychotics (LAIs) and clozapine. Methods: we surveyed Psychiatry Residents in the Queens Psychiatry training program with regard to their training experience, knowledge, and attitudes towards the use of FGAs, depot antipsychotics, and clozapine. Results: we obtained an 89% response rate on our survey. Two-thirds of respondents were aware that first- and second-generation antipsychotics (SGAs) have similar efficacy, and a similar proportion perceived FGAs to have more or 'stronger' side effects. A lack of training experience with FGAs was noted by 48% of residents as a significant barrier in prescribing FGAs. Although the majority of residents received some exposure to FGAs, nearly 50% had never initiated FGAs themselves. And while over 90% of residents felt confident about initiating an oral SGA as a regular medication, only 24% felt confident with FGAs (P <0.0001). Residents reported that 40% of the time or more, they would not provide information about LAIs as an option for a patient starting on antipsychotics for the first time. Additionally, over 50% of residents reported they did not feel confident about starting a patient on clozapine. Discussion: our survey highlights the need for better training in the use of FGAs, clozapine, and LAIs. These medications can be effectively used in providing patients with the most appropriate evidence-based treatment options to improve treatment outcomes, while ensuring that these resources are not lost to future generations of psychiatrists.

No. 24
Managing a Mental Health Clinic: Applying Lessons Learned From Deming's System of Profound Knowledge Used in Industrial Quality Improvement Methods
Poster Presenter: Jaskanwar S. Batra, M.D.

SUMMARY:
By using Deming's System of Profound Knowledge, we can understand the complex nature of mental health care delivery and we will make improvements in care delivery thus improving access to those suffering from mental illness. By using this approach, we venture along four important components: 1) Appreciation of a System – System mapping, flowcharts help in understanding the system. 2) Theory of Knowledge – Perhaps the best known of all of Deming's teachings. Use PDSA methodology to assess the problem, create a plan, making changes and then measure progress by observing data. Make further improvements as needed. 3) Psychology of Change – Understand what motivates people. Are monetary rewards the only way to motivate people? Let's look at the research. Research indicates autonomy, mastery and creativity as the tools to motivation. 4) Knowledge about Variation - Create control charts to understand variation. Understanding that the approach to common cause and special cause variation can be vastly different and if done improperly can lead to worse outcomes. By going beyond the PDSA cycle, we can use lessons from industrial quality improvement techniques to improve delivery of mental health care at our clinic at the same time as achieving better financial results. To demonstrate how well this method works, we will demonstrate reductions in wait times for appointments to the clinic, improving clinic referrals, improving staff productivity as well as improving the financial health of the organization. All of these point to improved access to mental health care in our community. Better mental health care means better overall health of our patients. This model could be very effective in improving care in a value-based healthcare environment. The outcomes of our project demonstrate real-world lessons and experience. We will show you outcomes from a busy, urban clinic with clinical staff that includes social workers, psychologists and psychiatrists.

No. 25

Attitudes of Chief Residents in Psychiatry and Neurology Regarding Maintenance of Certification

Poster Presenter: Linda Drozdowicz, M.D.
Co-Authors: Larry R. Faulkner, M.D., Asher B. Simon, M.D.

SUMMARY:

The American Board of Psychiatry and Neurology (ABPN) is the organization that conducts certification and maintenance of certification (MOC) for psychiatrists and neurologists according to standards set forth by the American Board of Medical Specialties (ABMS). MOC consists of four parts, one of which is a secure, proctored examination that must be taken every 10 years. Many physicians have expressed dissatisfaction with MOC, including the secure MOC examination, due to logistical concerns, cost in time and money, and knowledge that cramming for an infrequent, high-stakes examination is not the best way to encourage adult learning. As a result, the ABPN is implementing a Pilot Project to test an optional alternative to the 10-year MOC examination, which will be an open-book, journal article-based self-assessment system. To assess potential preferences regarding MOC and the Pilot Project, we surveyed current U.S. Chief Residents in psychiatry and neurology regarding their attitudes towards MOC. Chief Residents represent a group of highly experienced trainees who have not yet entered the MOC program, so they are an ideal demographic to share objective opinions on the theoretical components of MOC as well as on the Pilot Project alternative. IRB exemption was granted by the Icahn School of Medicine at Mount Sinai. 191 Chief Residents from across the country responded to the survey, and 98% of respondents indicated that they had heard of the ABPN. However, a significant portion knew neither the actual function of the ABPN nor the requirements for board certification. Respondents agreed at least somewhat that board certification should be required to practice medicine (75%) and that lifelong learning is important for all physicians (96%). Without labeling them as such, we asked survey participants their opinions on the four parts of MOC. Respondents agreed at least somewhat that board certified physicians should be required to maintain an unrestricted medical license-MOC Part 1 (70%); that ongoing CME activities should be required of practicing physicians-MOC Part 2 (90%); that self-assessment activities should be required of practicing physicians-MOC Part 2 (70%); that practicing physicians should have to demonstrate ongoing acceptable levels of medical knowledge-MOC Part 3 (84%); and that physicians should have to document their involvement in efforts to improve their clinical practice-MOC Part 4 (65%). Only 37% of respondents agreed at least somewhat that practicing physicians should be required to pass a secure, proctored MOC examination every 10 years to maintain board certification. Finally, participants were asked which method they would prefer for documenting to the public that they are maintaining acceptable medical knowledge in their specialty: passing a secure, proctored examination on a regular basis (e.g., every 10 years) or regularly reading and successfully answering questions on a reasonable number of articles in their specialty as sel

No. 26

The Diagnostic Utility of Lactate Infusion and Carbon Dioxide Inhalation for Panic Disorder

Poster Presenter: Andrew Wiese
Co-Authors: Anthony Schmiedeler, Nashaat Nessim Boutros, M.D.

SUMMARY:

Background: Laboratory tests have been essential in modern medicine and have allowed for accurate diagnosis and differentiation from related pathologies. Like traditional medicine, psychiatric researchers and practitioners have identified biological measures that can differentiate healthy from non-healthy individuals. Despite the development of these diagnostic tools, psychiatric medicine has lagged behind traditional medicine in utilizing these biological measures. The present study examines the possible clinical utility of lactate infusion and Co2 inhalation in diagnosing Panic Disorder (PD). Methods: A previously published 3-step approach to identifying laboratory-based diagnostic tests was applied to available literature assessing the ability of both lactate infusion and Co2 inhalation to induce panic attacks in PD patients, healthy controls, and individuals with other psychiatric conditions. Studies were categorized

based on the 3-step approach. Induction of panic attacks following lactate infusion and Co2 inhalation were compared between individuals with PD and comparison groups. Results: Twenty-two papers were admitted to the analysis for lactate infusion. Of those, 20 were classified as step-1, indicating that they only examined PD-healthy controls subjects. A logistic regression was conducted to predict panic attacks following lactate infusion, with PD as a predictor variable. Results reveled that PD was a significant predictor of panic attacks following lactate infusion, with a Wald statistic of 121.57 ($p < .001$), and an odds-ratio value of 48.01. Similar findings were obtained for Co2 inhalation with a total of 15 papers of which 11 were step-1. A logistic regression revealed that PD was a significant predictor of panic attacks following Co2 inhalation, with a Wald statistic of 119.91 ($p < .001$) and an odds-ratio value of 12.34. These results reveal that lactate and Co2 are more likely to induce panic attacks in individuals with PD compared to controls. Discussion: Both lactate infusion and Co2 inhalation show promise as diagnostic tests for PD, but need to be examined further. Results from the present study indicate that these procedures can induce panic attacks in individuals with PD. However, the underrepresentation of studies comparing PD to related disorders makes it unclear if the induction of panic attacks is unique to PD, or if transdiagnostic characteristics found in both PD and related pathologies are responsible for panic induction. Future research should compare panic attacks following lactate infusion and Co2 inhalation in both individuals with PD and individuals with related illnesses where panic symptoms are often present, such as Social Anxiety, Specific Phobia, and Obsessive-Compulsive Disorder.

No. 27

Joint Hypermobility: The Clue to Understanding Somatic Comorbidity

Poster Presenter: Andrea Bulbena, M.D.
Co-Author: Antonio Bulbena, M.D.

SUMMARY:

Background: Research points toward a close relationship between anxiety and somatic conditions. While some organic conditions produce anxiety-like symptoms, other somatic conditions are found among anxiety disorders, although this area is understudied. Additionally, both anxiety and somatic disorders have been associated with the Joint Hypermobility Syndrome (JHS). The main aim of this study is to evaluate the frequency and burden of somatic comorbidity in patients with anxiety disorders. Secondary aims include assessing whether patients with anxiety disorders have greater JHS and also assess the role of the JHS in the correlation between anxiety and somatic conditions. **Methods:** There were 3 study groups; anxiety disorders (AD) (N=100), controls with major depressive disorder (MDD) (N=50) and controls without any mental illness (HC) (N=50). Instruments used included the a structured interview (MINI), the TOPYPS scale (to evaluate the burden of somatic and organic conditions), Hospital del Mar Criteria for JHS, and the Anxiety Severity Index-3 (ASI-3). RESULTS The AD group scored significantly higher in the TOPYPS compared to the MDD group ($p<0.001$) and HC ($p<0.001$). They also had significantly greater number of body systems affected ($p<0.001$), and greater frequency of JHS ($p<0.001$). Subjects with JHS had a greater number of body systems affected ($p=0.012$) and greater anxiety sensitivity ($p<0.001$), compared to the non-hypermobile subjects. The greater number of body systems affected (in AD and JHS) was not translated into greater severity of illness in neither of the cases. **Conclusion:** Subjects with anxiety suffer from greater somatic and organic conditions compared to depressed patients and healthy controls. They also have higher frequency of JHS, and those with JHS exhibited also a greater number of body systems affected, without implying a greater severity of illness. A preliminary association between panic/phobic disorder, JHS and somatic conditions has been proven although subsequent studies should further explore the role of the connective tissue in this association.

No. 28

Interpersonal Sensitivity Mediates the Relationship Between Perfectionism and Social Anxiety in Social Anxiety Disorder Patients With Comorbid ADHD

Poster Presenter: Ahmet Koyuncu

SUMMARY:

Background: Our aim in this study is to evaluate the association between social anxiety, perfectionism

and interpersonal sensitivity (IPS) in patients with social anxiety disorder (SAD) with comorbid childhood attention deficit/hyperactivity disorder (ADHD) by using Structural Equation Modelling (SEM), and to determine if IPS is a mediator between social anxiety and perfectionism. Methods:155 adults with a primary diagnosis of SAD were enrolled. Patients were assessed by using the Structured Clinical Interview for DSM-IV (SCID-I), Schedule for Affective Disorders and Schizophrenia for School Age Children—Present and Lifetime Version (K-SADS-PL)'s ADHD module, Frost Multidimensional Perfectionism Scale (FMPS), Liebowitz Social Anxiety Scale (LSAS) and Interpersonal Sensitivity Measures (IPSM). According to the K-SADS-PL, 105 of 155 patients (67.7%) met criteria for childhood ADHD. For statistical analyses we used the SEM program AMOS. The first analyses give the correlations and reliability coefficients of LSAS, IPSM and FMPS. Secondly, we introduced SEM and goodness of fit of the measurement models. Then, we determined mediating effects of direct and indirect factors, by testing with comparative models, and the available mediators were confirmed by the Sobel test. Results: In Model 1, the influence of the FMPS on IPSM and of IPSM on LSAS were examined and we found that FMPS had a positive effect on IPSM (?=.47;p?.001). Also, IPSM had positive effects on LSAS (?=.69;p?.001). The goodness of fit values of structural model were determined as CMIN/DF=1, GFI=.99, AGFI=.96, CFI=1, and RMSEA=.06. In the Model 2, maladaptive evaluation concern dimension of FMPS (MEC) had positive effects on IPSM (?=.52;p?.001). There was also a positive effect of IPSM on LSAS (?=.70;p?.001). We could not find a positive effect of positive achievement striving dimension of FMPS (PAS) on LSAS (?=-.09;p>.05). The goodness of fit values of this structural model were determined as CMIN/DF=0.02, GFI=1, AGFI=.99, CFI=1 ve RMSEA=.00. We might suggest that since these results are good, the data was compatible with both models. IPS was found as an indirect effect (0.35) between FMPS and LSAS, whereas FMPS did not have a significant direct effect on LSAS. The Sobel test for research model was found to be within a convenient range and to be significant (z=4.8; p?.001). Conclusion: Our findings indicated that the data was compatible with modelling in SEM which was built with these three variables, and the goodness of fit values confirmed the model. We found that that IPS is a strong mediator in relation between social anxiety and perfectionism and that the relationship between social anxiety and perfectionism is an indirect feature rather than direct in SAD patients with comorbid ADHD. This study received no financial support.

No. 29

Psychotherapy Pilot Program for Benzodiazepines Deprescription in Anxiety Disorders

Poster Presenter: Antonio Benabarre Hernandez
Lead Author: Antonieta Also Fontanet
Co-Authors: Belchin Kostov, Antoni Sisó-Almirall

SUMMARY:

Introduction Anxiety disorders are one of the most frequent reasons for consultation and benzodiazepines are one of the most prescribed drugs. The objective of this study was to implement a psychotherapy pilot program to deprescribe benzodiazepines in patients with anxiety disorders in Primary Care. Material and methods Before-after clinical trial without control group performed in two urban health centers. Patients aged 18 to 60 years, with diagnosis of anxiety disorder on benzodiazepine treatment were included. The program consisted of 7 sessions of individual psychotherapy, and individualized pattern of deprescription. The Goldberg test and QoL test were administered in the first, third and last sessions. Results A total of 123 patients participated, 107 (87%) finished the study, being 93 (86.9%) women, with a mean age of 44.7 years ± 11.3DE. The majority of the participants had a partner (50.4%), academic studies (70.1%) and a service sector profession (73.8%). Most had generalized anxiety disorder diagnosed in the past year. After completing the program, benzodiazepines could be withdrawn in 61 participants (57%), in 34 (31.8%) the doses were decreased and in 12 (11.2%) the same dose was maintained. There was also a significant improvement in the mental dimension of the SF-12, as well as in the Goldberg test score. Conclusions The program has proven to be a useful tool for deprescribing benzodiazepines, reducing anxiety and improving quality of life. Implementing such a program in a Primary Care Center would allow a better approach of the anxiety disorders, avoiding

polypharmacy. KEYWORDS Anxiety disorder, Psychotherapy, Primary care, Benzodiazepine.

No. 30

Effects of Nonpharmacological Therapies on Anxiety Scores and the Inflammatory Biomarker Cortisol: A Meta-Analysis of Placebo-Controlled Studies

Poster Presenter: Raza Sagarwala

SUMMARY:

Background: Although pharmacological therapy, such as SSRIs, has proven usually to be efficacious in treating anxiety, a subset of the anxiety patients remains resistant to this traditional therapy or intolerant to iatrogenic side-effects. Nonpharmacological therapies, other than standard psychotherapy techniques, have emerged as possible alternatives in the treatment of anxiety. However, published studies have shown inconsistent results and many of them are open label or anecdotal. We conducted a meta-analysis of placebo-controlled studies to assess the efficacy of non-pharmacological therapy on anxiety. Because serum cortisol levels are elevated during anxiety, we also conducted a meta-analysis of cortisol levels before and after nonpharmacological treatments. Methods: A search through PubMed, Google Scholar, and Scopus was conducted to identify randomized controlled trials published from January 2010 to May 2017 that assessed the effects of various nonpharmacological therapies on State Trait Anxiety Index (STAI) scores and cortisol levels before and after treatment, yielding 26 studies. STAI scores and cortisol levels were used to assess the clinical and biological efficacy of the non-pharmacological therapies, respectively. Studies were only included in the meta-analysis if they reported an effect size or data to calculate the effect size of the changes in STAI scores and cortisol levels in the subjects. Results: 5 studies met the criteria for inclusion. These studies monitored the effects of Hatha Yoga (n=117), Acupuncture (n=29), Relaxing Interventions (n=154; n=59), and Qiqong (n=50). The meta-analysis reveals that participants receiving nonpharmacological therapy had a statistically significant decrease in STAI scores (d= -0.372; 95%CI -0.608, -0.136; p= 0.002) and cortisol levels (d= -0.255; 95%CI -0.497, -0.013; p= 0.039) after intervention. Conclusion: Our meta-analysis suggests that nonpharmacological therapy improved both the clinical and the biological manifestations of anxiety and thus may be useful as adjunctive or alternative therapy to drug treatment. However, due to the limited number of controlled studies, additional investigations are needed to validate the findings of this meta-analysis.

No. 31

Endocannabinoids System and Ketogenic Diet in Anxiety

Poster Presenter: Ritvij Satodiya, M.D.
Co-Author: Shailesh Bobby Jain

SUMMARY:

Background: The role of endocannabinoids (eCBs) system in pathophysiology of anxiety disorders is well known1,2. The association of eCBs system with anxiety emerged from the effects of cannabis, most commonly used recreational substance to alleviate anxiety3. The constellations of neurobiological process from activation of eCBs system modulates mood1. eCBs system is a new target to treat anxiety4. Not much is studied about the effects of conservative treatment like diet in treatment of anxiety disorders. Current evidence: Endocannabinoids system and Anxiety o Exogenous cannabinoids (cannabis) has unreliable effects from its two major compounds, Delta-9-tetrahydrocannabinol (THC): anxiogenic effect; and Cannabidiol (CBD): anxiolytic effect. Final response is an outcome of complex neurobiological interplay within eCBs system. o The behavioral response from cannabinoids is a reflection of regulatory role of eCBs system over noradrenergic and serotonergic systems5. o Reduced levels of eCBs adversely affects the emotional state causing enhanced anxiety response6. o Cannabinoids receptors activation mitigate the behavioral response to stress conditions7. o Cannabinoids exert biphasic response from its dose dependent interactions with cannabinoids, GABA and glutamatergic receptors. Effects are anxiogenic at high dose and anxiolytic at low dose8. This proves the importance of eCBs in emotion regulations. Ketogenic Diet (KD) and Anxiety o KD, high in fat content, has been studied sporadically for therapeutic effects in mood disorders9. o KD protects against oxidative,

metabolic and excitotoxic insults, serving as beneficial agent with anxiolytic properties. o KD prevents neuroinflammation in anxiety related brain regions like amygdala, insula and anterior cingulate cortex10. This results from enhanced activity of neurotropic factors and reduction in expression of apoptotic factors11. o Prolong use of KD improve behavioral and cognitive domains to cope better in anxiety disorders12. o This is supported by preclinical studies showing alterations in eCBs in rats with high fat diet13, anxiolytic response in offspring mice on exposure to KD in utero14 and improved social interactions during anxiety with KD15. These evidence demonstrates anxiolytic properties of KD. Hypothesis: KD has shown influencing effects on eCBs system, altering the eCBs levels and its receptor activity in brain13. Such modifications in eCBs system through changes in eCBs levels and, biphasic effects and altered response of receptors is responsible for mood modulations. We hypothesis that anxiolytic properties of ketogenic diet may be mediated through endocannabinoids system. Future directions: Despite of promising results from KD in anxiety among rodents, we have very limited evidence for understanding the association of eCBs system with KD in anxiety disorders. There is a need to investigate involvement of eCBs system for therapeutic effects of KD in anxiety disorders.

No. 32

Screening for Bipolar Disorder and Finding Borderline Personality Disorder: A Replication and Extension

Poster Presenter: Mark Zimmerman, M.D.

SUMMARY:

Background: Our group previously reported that patients who screened positive on the Mood Disorders Questionnaire (MDQ), the most frequently studied screening scale for bipolar disorder, were as likely to be diagnosed with borderline personality disorder (BPD) as with bipolar disorder. A limitation of that study was that we examined the performance of the MDQ in patients presenting for various psychiatric disorders including depression. The recognition of bipolar disorder, and its differential diagnosis with BPD, is of greatest clinical relevance in depressed patients. In the present report from the Rhode Island Methods to Improve Diagnostic Assessment and Services (MIDAS) project, we attempted to replicate our initial findings in a new sample of psychiatric outpatients, and we also examined the performance of the MDQ in depressed patients. Methods: Seven hundred twenty-one psychiatric outpatients were interviewed with the Structured Clinical Interview for DSM-IV (SCID) and Structured Interview for DSM-IV Personality Disorders (SIDP-IV), and asked to complete the MDQ. Results: In the total sample of 721 patients, 9.4% (n=68) were diagnosed with bipolar disorder, and 10.0% (n=72) were diagnosed with BPD. More than one-sixth of the patients (17.9%, n=129) screened positive on the MDQ. More patients who screened positive on the MDQ were diagnosed with bipolar disorder (34.1%, n=44) than with BPD (25.6%, n=33). BPD was more frequently diagnosed in the MDQ positive group than the MDQ negative group (27.1% vs. 5.8%, OR = 6.0, 95% C.I, 3.3-10.9, p<.001). We repeated the analyses for the 279 patients who were in a major depressive episode at the time of the evaluation. In this sample, 11.5% (n=32) were diagnosed with bipolar disorder and 13.3% (n=37) with BPD. Slightly more patients who screened positive on the MDQ were diagnosed with bipolar disorder (7.2%, n=20) than BPD (5.7%, n=16). BPD was more frequently diagnosed in the MDQ positive group than the MDQ negative group (30.2% vs. 8.8%, OR = 4.5, 95% C.I, 2.0-10.1, p<.001). Discussion: Replication is central to scientific study, and, when attempted, is often not achieved. The results of the present study were generally consistent with the original report. The present study found a 4 to 5-fold increase in the frequency of BPD in patients who screened positive compared to patients who screened negative on the MDQ, and this was also true when the analysis was limited to depressed patients. . While we did not find that the frequency of BPD was quite as high as bipolar disorder in the patients who screened positive on the MDQ, as we found in our initial study, we nonetheless found that the frequency of BPD was 80% of the rate of bipolar disorder thereby supporting the conclusion that the MDQ is not particularly effective in distinguishing bipolar disorder from BPD. No funding was received for this study.

No. 33

Screening for Psychiatric Disorders With Self-Administered Questionnaires
Poster Presenter: Mark Zimmerman, M.D.

SUMMARY:
Background: Given the time demands of clinical practice it is not surprising that diagnoses are sometimes missed. To improve diagnostic recognition, self-administered screening scales have been recommended. A problem with much of the research effort on screening scales is the confusion between diagnostic testing and screening. It is important for a screening test to have high sensitivity because the more time intensive/expensive follow-up diagnostic inquiry will presumably only occur in patients who are positive on the initial screen. Investigators vary in how they analyze their data in determining the recommended cutoff score on a self-administered screening questionnaire. To illustrate this, in the present report we examined how often each of the different approaches towards determining a cutoff score on bipolar disorder screening scales were used. Methods: We reviewed 68 reports of the performance of the 3 most commonly researched bipolar disorder screening scales to determine how the recommended cutoff on the scale was derived. Results: We identified 34 studies of the Mood Disorders Questionnaire, 24 studies of the Hypomanic Checklist-32, and 10 studies of the Bipolar Spectrum Disorders Scale. Nine publications examined the performance of 2 scales. Two studies did not identify, suggest, or recommend a cutoff score. Only 11 studies prioritized scale sensitivity in recommending a cutoff for screening, three of which analyzed the data from both a prioritizing and maximizing perspective and recommended multiple cutoff scores. Overwhelmingly, a maximizing approach was the most common towards selecting a cutoff (55 analyses). Approximately one-third (n=19) of these 55 analyses used either Youden's index (n=8) or the maximum sum of sensitivity and specificity (n=11) to select a cutoff. In the remaining reports the authors indicated that the cutoff chosen represented a balance between the scale's sensitivity and specificity, the optimal cutoff, or the best cutoff, without clarifying how this was determined. Most studies recommended a cutoff point on the screening scale that optimized the level of agreement with the diagnostic gold standard. Only 11 (16.2%) studies recommended a cutoff that prioritized the scale's sensitivity. Conclusions: It is important for clinicians to understand the difference between screening and diagnostic tests. The results of the present study indicate that most studies of the performance of the 3 most commonly studied bipolar disorder screening measures have taken the wrong approach in deriving the cutoff score on the scale for the purpose of screening. No funding was received for this study.

No. 34
Association Between Genetic Variation in the Myo-Inositol Monophosphatase 2 (IMPA2) Gene and Age at Onset of Bipolar Disorder
Poster Presenter: Iria Grande, M.D., Ph.D.

SUMMARY:
Introduction: The age at onset of bipolar disorder (BD) has significant implications for severity, duration of affective episodes, response to treatment, and psychiatric comorbidities (Grigoroiu-Serbanescu et al., 2014). It has been suggested that early-onset BD (EO-BD) could represent a clinically distinct subtype with probable genetic risk factors different from those of late-onset BD (LO-BD) (Etain et al., 2010). To date, several genes have been associated with BD risk but few studies have investigated the genetic differences between EO-BD and LO-BD. The aim of this study was to evaluate if variants of the gene coding for myo-inositol monophosphatase (IMPA2) are linked to the age at onset of BD. Method: 235 bipolar patients were initially recruited and assessed. The final sample consisting of 192 euthymic individuals, was compared according to the age at onset. Polymorphisms were genotyped in the IMPA2 gene (rs669838, rs1020294, rs1250171, and rs630110). Early-onset was defined by the appearance of a first affective episode before the age of 18. Results: The analyses showed that in the genotype distribution rs1020294 ($p = .01$) and rs1250171 ($p = .01$) were associated with the age at onset. The significant effect remained only in the rs1020294 SNP in which G carriers were more likely to debut later compared to patients presenting the AA genotype ($p = .002$; OR = 9.57, CI95%[2.37-38.64]). The results also showed that EO-BD tended to experience more alcohol

misuse (p = .003; OR = .197, CI95%[.07-.58]) compared to LO-BD. Conclusions: Our results provide evidence for genetic differences between EO-BD and LO-BD at the IMPA2 gene as well as clinical differences between subgroups with therapeutic implications.

No. 35

Evaluation of Patient Satisfaction in a State Reference Center of Bipolar Disorder

Poster Presenter: Iria Grande, M.D., Ph.D.

SUMMARY:

Considering progressive patient empowerment as health care system users, patients' opinions to improve health care services are fundamental.1,2 The aims of the present study were to evaluate the satisfaction of outpatients attended in a state reference center Bipolar Disorder Unit (BDU) compared to an ordinary community mental health service (CMHS), identify opportunities for improvement, and elaborate proposals of improvement. A self-administered questionnaire which preserves anonymity was created. One hundred fifty-two patients from the BDU and 136 from a CMHS were consecutively recruited. Patients attended in the BDU presented a higher grade of satisfaction regarding technical knowledge of the staff (p=0.009) but a lower grade of satisfaction related to information received by the staff (p=0.001) and length of waiting time (p=0.001). The Net Promoter Score (NPS) of BDU was 67%. Users attended in a state reference unit reported being satisfied with their outpatient care.

No. 36

Emotional Memory Changes and Its Correlation With Severity in Bipolar Disorder

Poster Presenter: Adam Fijtman
Co-Authors: Joana Bücker, Dayane Santos Martins, Marcia Kauer Sant'Anna

SUMMARY:

Background and Aims Emotional memory (EM) is a type of memory which requires emotional arousal for acquisition and consolidation. EM is highly dependent of amygdala function and, therefore, the assessment of an abnormal EM in Bipolar Disorder (BD) could indirectly indicate disfunctional hyperactivation of the amygdala. This study aims to correlate EM changes in BD with severity of disease. Method Thirty three BD and 20 paired Healthy Controls (HC) completed clinical questionnaire and EM scale. The EM assessment consisted of 20 lists of 12 words each, including Emotional (E), E-1 (precedes E), E+1 (follows E), Perceptual (P), P-1 (precedes P), P+1 (follows P) and Control (C). Participants should mention all recalled words from each list. T-test assessed which subject group had better general recall. Generalized estimating equations (GEE) assessed influence of diagnosis, of type and position of words in recall, and of number of previous mood episodes (NME). Results HC showed a better general recall of words than BD (52.05 ±15.33 vs.34.06 ±15.92, p<0.001). In statistical models, there was a significant fit only for group difference: BD showed an increased EM score despite of type or position of the word (p=0.008). When we added NME to the model, there was an association with EM (p=0.042). Correlation between EM and NME was significant (r=-0.324, p<0.001). Conclusion BD showed an enhanced memory for items either with negative valence or perceptual difference and for those words that surrounded them. This enhancement seems to decline with NME. Amygdala activation and function may be a promising marker of stages in BD.

No. 37

Reporting of Smartphone Applications in Studies for Mood Disorders Using WHO Mhealth Criteria

Poster Presenter: Aditya Sareen
Co-Authors: Abhishek Wadhwa, M.D., Inmaculada Peñuelas-Calvo

SUMMARY:

Mobile devices continue to transform ways we diagnose, treat and assess mental illness. Through the use of these technologies, researchers continue to develop new means to detect and monitor behavioral elements, increase treatment adherence and improve patient communication. World Health Organization has recently published World Health Organization mHealth Evaluation, Reporting and Assessment guidelines for evaluating mobile health applications. We conducted a literature search using PubMed to find studies reporting on the application for mood disorders. Using these guidelines we

evaluated the strengths and weaknesses of existing studies reporting on Applications for mood disorders including Bipolar spectrum disorders and Depression spectrum disorders. We found that several studies do report on the feasibility of such applications and the benefits to use them. They inconsistently report on other factors such as cost assessment, interoperability, and data security. Further research is required to expand our knowledge and enrich the clinical utility of these applications.

No. 38

Differences Between Multiple Versus Single Lifetime Suicide Attempters With Bipolar Disorders: A Retrospective Study

Poster Presenter: Bernardo Dell'Osso, M.D.
Co-Authors: Beatrice Benatti, Laura Cremaschi, Chiara Arici, Benedetta Grancini, Matteo Vismara, A. Carlo Altamura

SUMMARY:

Background. The risk of suicide in Bipolar Disorder (BD) has been estimated up to 20-30 times higher compared with the general population. Previous suicide attempts (SAs) represent well-established risk factors for further attempts and for death by suicide in patients with psychiatric disorders. However, little is known about the socio-demographic and clinical profile of BD patients with a history of multiple SAs (MSAs). Aim of the present study was to characterize BD patients with MSAs versus single suicide attempt (SSA) within a large Italian sample. Methods. An original sample of 354 patients affected by BD, recruited at the University Clinic and related community services at the Department of Psychiatry, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico of Milan, was screened for the presence of previous SAs (n=95 patients). Socio-demographic and clinical variables were then compared between patients with multiple vs single lifetime suicide attempts. Results. Bipolar patients with MSAs versus SSA showed a significantly longer bipolar illness duration (26.9±12.6 vs 21.2±12.8 years; p=0.05), and they more frequently lived alone (38.5% vs 17.2%; p<.05), had more than one psychiatric comorbidity (39.3% vs 17.5%; p=.04), and used substance ingestion to commit suicide (e.g., overdose) (78.6% vs 47.2%, p=.009), although the latter was the most common suicide attempt method in both groups. Conclusion. Present findings suggest significant different socio-demographic and clinical features in bipolar patients with MSAs versus SSA. Further investigation is needed to confirm reported data.

No. 39

A Neuroscience Theory of Bipolar Disorder

Poster Presenter: William Walsh
Co-Author: Robert de Vito

SUMMARY:

Bipolar Disorder, also known as manic depression, is a unique mental disorder distinguished by alternating periods of excitability (mania) and depression. More than six million Americans are challenged by this disorder which continues to be a leading cause of suicide, unemployment, and loss of human potential. After decades of intensive research, the fundamental causes and mechanisms of this mental disorder have remained poorly understood. In 2013 the authors initiated an investigation of bipolar disorder in an attempt to capitalize on remarkable advances in fundamental brain science achieved in recent years. We concentrated on neuroscience properties and mechanisms of individual brain neurons, glial cells and ion channels. After four years of study we discovered a single mechanism that can explain the chronic cycling between mania and depression that has puzzled researchers for decades. In our model, the initiating event is the loss of the brain's ability to produce robust resting potentials (voltages) due to excessive build-up of potassium ions in extracellular spaces. Hundreds of genes collaborate in the clearance of potassium ions into glial cells and presynaptic neurons which may explain why dominant bipolar-predisposing genes have never been found for this highly-heritable disorder. In our model, the weakened resting potentials initiate the following chain of events: (a) accelerating neuronal hyperactivity (mania) produces a steadily-increasing outward flow of potassium ions that continually lowers resting potentials; (b) eventually certain local brain areas become unable to form functional action potentials resulting in widespread neuronal hypoactivity and clinical depression; (c) as time passes, the disabled brain sites recover the ability to form functional resting potentials due to reduced

potassium neuronal outflow and improved potassium clearance; (d) the brain returns to a manic hyperactive condition because of a continuing inability to develop robust resting potentials; (e) in the absence of effective treatment, the individual can be trapped in a permanent cycle of alternating mania and depression. This presentation will include increasing evidence that bipolar disorder is a channelopathy including large genome studies (GWAS) implicating potassium and calcium ion-channel genes. Potential triggers of bipolar onset including epigenetic insults, impaired neuronal pruning, and emotional trauma will be discussed.

No. 40

Reduced Left Lateral Prefrontal Activity During Verbal Fluency Task in Subject With Remitted Bipolar Disorder

Poster Presenter: Halise D. Ozguven, M.D.
Co-Authors: Yasemin Hosgoren Alici, Berker Duman, Yagmur Kir, Bora Baskak, Emre Kale

SUMMARY:
Introduction: Previous researches suggest that verbal fluency (VF) and working memory(VM) are impaired in depressive and manic states of bipolar disorder(BD) due to prefrontal dysfunction but this impairment may or may not be observed in subjects in clinical remission. We aimed to examine prefrontal cortex activity with functional near infrared spectroscopy (fNIRS) during VF and association with WM in subjects with remitted BD. Method: We compared prefrontal cortical activity in subjects with BD (N=31) with healthy control subjects (N=27) during a modified VF task with 24-channel fNIRS. We defined four regions of interest in the PFC namely; Left Lateral PFC (LLPFC), Right Lateral PFC (RLPFC), Left Ventro-medial PFC (LVmPFC) and Right Ventro-medial PFC (RVmPFC). We used independent samples t-test for group comparisons in order to compare cortical activity patterns and test performances. Bonferroni correction was used to prevent type-1 errors that may possibly result from multiple testing. Spearman correlations were used to test the associations between the neuroimaging and the behavioral data. Results: The two groups displayed a comparable performance in the VF, however prefrontal activity in the LLPFC was significantly higher in bipolar patients. Statistically significant ACT performance was positively correlated with cortical activity only in LLPFC (r=0.419, p0.019). Symptom severity that was ascertained by the YMRS and HAM-D were not associated with cortical activity during VF. Conclusions:Higher activity in the LLPFC may have been employed in the index group to display a similar performance with healthy controls during verbal fluency. The previously shown association between WM and VF in BD may also be evident in terms of cortical activity.

No. 41

Neuropsychological Performance in Depressive Patients With Bipolar Disorder Versus Healthy Controls

Poster Presenter: Alejandra Arreola Cabello, M.D.
Co-Authors: Ricardo Caraza Camacho, M.D., Alejandra Arreola Cabello, M.D., Jose Alfonso Sanchez de la Barquera, M.D., Denisse de la Rosa Galarza

SUMMARY:
Aim: The present study was conducted to assess cognitive performance across specific domains in depressive bipolar patients (DBPs), not older than 50 years (to avoid potential age-related bias) versus healthy controls (HCs). It has been proven that executive functioning deficits contribute to a significant proportion of the burden of disease associated with bipolar disorder. Methods: A cognitive battery, including the Wechsler Adult Intelligence Scale IV (WAIS-IV), Verbal Fluency Test (VFT) and Verbal Comprehension (VC) from Barcelona's Test, Benton Judgment of Line Orientation (JLO), Rey-Osterrieth Complex Figure Test (Rey), España-Complutense Verbal Learning Test (TAVEC), Trail Making Test (TMT), Test of Attention d2 (d2), Corsi Block-Tapping Test (CORSI), Stroop Color - Word Test (STROOP), Tower of London (TOL-DX), and Wisconsin Card Sorting Test (WCST), was administered to 18 subjects (10 DBPs and 8 HCs) and differences between the groups were analyzed. Results: Depressive bipolar patients performed significantly worse than HCs in: Processing Speed composite score (t= -3.020), and Full Scale composite score (t= -2.257) from WAIS-IV, Order Execution from VC (t=-2.553), Long Delay Free Recall from TAVEC (t= -2.225), Commission Error

from d2 (t=-2.854), Inhibition (Color-Word) from STROOP (t= -2.720), and Percent Perseverative Responses from WCST (t=-2.201). On the other hand DBPs performed better than HCs in the Phonological Fluency from VFT (t=2.344) (all p<0.05). Conclusion: The group of depressive bipolar patients presents a significant difference in Executive Functions performance compared to healthy controls, primarily impairments in processing speed, inhibitory control and cognitive flexibility. The differences in performance in order execution and phonological fluency are related to impulsivity, and differences in verbal memory associated with the executive component of free recall. Supporting the notion that specific cognitive functions are impaired during the depressive episode in subjects suffering from bipolar disorder. However, further studies with larger sample sizes are needed.

No. 42

A Double-Blind Placebo-Controlled Trial of Transdermal Selegiline in Depressed Bipolar I Patients With Borderline Personality Disorder

Poster Presenter: Paul Jay Markovitz, M.D., Ph.D.

SUMMARY:

Introduction: Patients with bipolar disorder (BP) and borderline personality disorder (BPD) share a number of symptoms (1-5). We present the results of a double blind, placebo controlled trial of transdermal selegiline used to treat patients meeting criteria for both BP I depression and BPD with current depression. Methods: Structured Clinical Interview for DSM IV Axis I and II (SCID-I and SCID-II) were utilized to make diagnoses. Anxiety disorders, somatic disorders, mania induction, psychosis, and lability were all assessed and monitored. 30 evaluable patients were enrolled, and randomized in a 2:1 ratio of 12 mg transdermal selegiline daily or placebo. Patients needed to complete at least 6 weeks of treatment to be part of the data analysis, and early terminators were replaced in the trial. There were 4 dropouts on placebo and 2 on selegiline, for a total of 36 patients enrolled. Hopkins Symptoms Checklist 90 Revised, Hamilton Depression Index, Hamilton Anxiety Index, and Young Mania Rating Scale were used at each visit. The Sheehan Disability Scale was done at baseline, 6 weeks, and 12 weeks. Results: Data was analyzed using a quadrille analysis. The top third of the patients in the trial had a decrease in their SCL-90R scores of 135.1 + 65.7 points vs. the entire placebo group reduction of 28.9 + 46.8 points (p-value 0.0047). All other scales and subscales showed similar results. Discussion: This small study suggests some depressed patients with comorbid BPI and BPD respond to transdermal selegiline. No mania was induced during the trial and responders to treatment showed a marked reduction in anxiety, depression, and somatic complaints. It also suggests the comorbid symptoms seen in both disease may have a matching neurochemistry (6-8) and opens the possibility of antidepressants being true mood stabilizers treating depression, mixed states, and mania in some patients. This is a small trial, and further studies are needed to validate the results.

No. 43

Comparesion of Neurocognitive Functions of Euthymic Bipolar II With Bipolar I Patients on Monotherapy

Poster Presenter: Vesile Senturk Cankorur, M.D., Ph.D.
Co-Author: Rifat Serav Ilhan

SUMMARY:

Objective: A growing body of studies has reported that cognitive dysfunctions persist in patients with bipolar disorder (BD) during the remission. However, there has been scarcity of data whether patients with BD-II in the euthymic period experience cognitive impairments and perform differently from the healthy population and BD-I patients on cognitive assessments. The aim of this study was to investigate neurocognitive functioning in euthymic BD-II and to compare them with those of euthymic BD-I patients and healthy controls. Method: Euthymic BD-II (n=24) and BD-I (n=56) patients on monotherapy, and healthy controls (n=35) were included. Structured Clinical Interview for DSM-IV was used to clinical diagnosis and WAIS-R general information, arithmetic, coding, block design subtests, Wisconsin Card Sorting Test (WCST) perseverative errors, non-perseverative errors, and category completed subtests; Wechsler Memory Scale-Revised (WMS-R) were applied for neurocognitive assessment. Possible differences between the groups were analyzed by univariate

analyses of variance (ANOVA). Results: There were no differences between three groups in terms of age, duration of education, and premorbid IQ. BD-I patients performed poorly compared to BD-II patients and controls on WMS-R (p=0.003; p<0.005) whereas no difference was found between BD-II and control groups (p=0.075). Both patient groups performance was poor on WCST completed categories compared to healthy controls (p&0.005; p=0.038). There was a difference between BD-I and BD-II group on WAIS-R block design subtest (p=0.024) while both patient groups did not differ from control group (p=0.757; p=0.068). Performances of WAIS-R coding subtest were not different between BD-I and BD-II group (p=0.237) while there was a difference between BD-I and control groups (p=0.029). No difference was found between BD-I and BD-II group in terms of the performance on WCST perseverative error subtest (p= 0.290) while BD-II group's performance did not expose difference compared to control group's (p=0.095). Both patient groups performance on WCST non-perseverative error subtest showed a significant difference compared to healthy controls (p=0.018; p=0.001) whereas there was no difference between patient groups (p=0.327). Finally, there were no differences among three groups on arithmetics subtests. Conclusion: BD-I and BD-II patients showed some similarities and some differences on neurocognitive assessments. Poor functioning in verbal memory and learning were particularly related to BD-I group. Two patient groups performed similarly on other domains of neurocognitive functions particularly on executive functions. Executive functions impairment was reported a common trait of patients with BD-I and BD-II whereas verbal memory and learning deficits has been reported to be seen to be more specifically associated with BD-I. The study suggested that patients with BD-I have more widespread cognitive dysfunction. According t

No. 44

Effects of Inflammation, Leptin Levels, Body Mass Index, and Functional Impairment in Bipolar Depression and Major Depressive Disorder

Poster Presenter: Robson Zazula

SUMMARY:

Background: Bipolar disorder (BD) and major depressive disorder (MDD) are related to higher body mass index (BMI), metabolic syndrome (MetS) and functional impairment. However, there are not enough studies comparing leptin levels, metabolic syndrome, and functional impairment in patients with BD and MDD. The present study aimed to examine BMI, MetS, functional impairment, leptin and lipid profiles in patients with BD and MDD in comparison with individuals without mood disorders (CON). Methods: Patients with BD (n=87), MDD (n=47) and CON (n=81) attended a psychiatric interview, they then filled a questionnaire and some scales in order to provide socio-demographic information and data about their clinical history, work status, functionality, family history of mood disorders as well as the severity of mania and depression symptoms, when applicable. Leptin and lipid levels, and inflammatory biomarkers were calculated. The presence or absence of MetS was evaluated according to the International Diabetes Foundation criteria. Results: There were considerable differences in the results when comparing groups with different educational levels. Patients with BD (10.48 ± 4.47) and MDD (9.09 ± 5.15) had only a few years of education, in comparison, CONs had, in average, two more years of access to formal education (12.63 ± 5.67; p<0.01). There were no differences regarding gender (p=0.06), marital status (p=0.80) or ethnicity (p=0.10). Patients with BD present higher BMI (28.26 ± 5.79) than patients with MDD (25.54 ± 4.44) but there were no differences between CONs (26.7± 4.82) and patients with MDD or BD (p=0.03). There were, however, differences in leptin levels between patients with BD (3135.09 ± 2646.86), CONs (1837.66 ±1894.22) and patients with MDD (1532.85 ± 1648.57; p<0.01). There were also differences between groups in MetS (p=0.04). Patients with BD were more likely to have MetS than patients with MDD, but there were no differences between patients with MDD and CONs. Patients with BD presented higher soluble tumor necrosis factor receptor 1 (sTNF-R1) levels (398.79 ± 338.26) than patients with MDD (234.16 ± 233.87) and CONs (338.41 ± 244.88; p<0.01). There were low levels of functional impairment between patients with BD in comparison with patients with MDD and CONs (p<0.01). Conclusion: Results suggest that patients

with BD had significantly higher rates of BMI, higher leptin and sTNF-R1 levels, and higher functional impairment than patients with MDD or CONs. These findings also suggest that the link between overweight and obesity, in BD is mediated by leptin levels and inflammation. Therefore, an association between functional impairment and metabolic levels could be an important focus for further studies.

No. 45

Efficacy and Safety of Lurasidone in Adolescents With Schizophrenia: Interim Analysis of a Two-Year, Open-Label Extension Study

Poster Presenter: Robert Goldman
Co-Authors: Michael Tocco, Andrei Pikalov, Ling Deng, Antony David Loebel, M.D.

SUMMARY:

Background: Long-term efficacy and safety data from prospective studies in adolescents with schizophrenia are limited. Lurasidone has demonstrated efficacy in the treatment of schizophrenia in both adults and adolescents. The aim of the current trial was to obtain long-term data on the safety and efficacy of lurasidone in adolescents with schizophrenia. Methods: Patients ages 13-17 with schizophrenia were randomized to 6 weeks of double-blind (DB) treatment with lurasidone 40 mg/d, 80 mg/d or placebo. Study completers were eligible to enroll in a 2-year, open-label (OL), flexible-dose (20-80 mg/d) extension study in which patients were continued on lurasidone, or switched from placebo to lurasidone (all patients were started on a dose of 20 mg/d). These data are the results of an interim analysis of the 2-year study. Effectiveness measures included the Positive and Negative Syndrome Scale (PANSS) total score (responder criteria, ≥20% reduction from DB baseline). Results: A total of 271 patients completed 6 weeks of DB treatment and entered the 2-year extension study. At the time of the interim analysis, 132 (48.7%) patients had completed 52 weeks of treatment (24 patients were 2-year study completers; 96 patients were still ongoing; and 12 patients had discontinued after 52 weeks); 57 (21.0%) patients were still ongoing in the first 1-year of treatment; and 82 (30.3%) patients terminated prior to week 52 (28 patients due to withdrawal of consent; 23 due to adverse events; 9 due to lack of efficacy; and 22 for other reasons). Mean PANSS total score at double-blind baseline was 93.5. Overall mean change from DB to OL baseline (after 6 weeks of treatment) was -17.5 (for patients assigned to lurasidone vs. placebo in the initial 6-week study, mean change was: -19.8 vs. -12.9). Overall mean change from DB baseline in the PANSS total score at weeks 28 (n=215), 52 (n=133), 76 (n=86), and 104 (n=24) was -29.2, -34.0, -35.0, and -34.1, respectively. Responder rates at OL baseline, week 52 and week 104 were 63.1%, 91.7% and 100%, respectively. During OL treatment, the most common adverse events were headache (21.8%), nausea (11.8%), anxiety (11.8%), somnolence (11.4%); 6.6% of patients reported an adverse event as severe. Median change in laboratory parameters from DB baseline to weeks 52 and 104, respectively, were: total cholesterol, -2.0 and -5.0 mg/dL; triglycerides, +3.5 and +3.0 mg/dL; hemoglobin A1c, 0.0 and 0.1%; prolactin in female, +0.5 and -0.5 ng/mL and males, +0.15 and +3.5 ng/mL; and mean change from DB baseline in weight at weeks 52 and 104 were 3.8 and 7.2 kg, vs. an expected weight gain of 3.3 and 5.1 kg, based on the gender-and-age specific CDC growth chart. Conclusion: In adolescents with schizophrenia, long-term treatment with lurasidone was associated with continued improvement in symptoms of schizophrenia. After up to 2 years of lurasidone treatment, minimal effects were observed on body weight, lipids, and glycemic indices.

No. 46

Lurasidone for the Treatment of Major Depressive Disorder With Mixed Features: Results of a 12-Week Open-Label Extension Study

Poster Presenter: Stephen Michael Stahl, M.D., Ph.D.
Co-Authors: Michael Tocco, Andrei Pikalov, Yongcai Mao, Antony David Loebel, M.D.

SUMMARY:

Background: For patients with major depressive disorder (MDD), DSM-5 introduced a new “mixed features” specifier to permit clinicians to note the presence of subthreshold manic symptoms during an episode. Mixed features are estimated to occur in at least 25% of MDD episodes, and are associated with increased severity, risk of recurrence, functional disability, and poorer prognosis. Lurasidone

demonstrated efficacy in a short-term study of patients with MDD with mixed features (1). We now report results of the 12-week, open-label, extension phase of this study that was conducted in patients in the US. Methods: In a multi-regional study, patients meeting DSM-IV-TR criteria for MDD, who presented with 2 or 3 protocol-defined manic symptoms, were randomized to 6 weeks of double-blind (DB) treatment with lurasidone 20-60 mg/d or placebo. Patients in the US who completed this study were eligible to enroll in a 12-week, open-label (OL), flexible-dose (20-60 mg/d) extension study in which patients were continued on lurasidone (Lur-Lur group), or switched from placebo to lurasidone (Pbo-Lur group). The primary efficacy measure was the Montgomery-Åsberg Depression Rating Scale (MADRS) total score. Results: Of the 52 patients in the US who completed the acute phase study, 48 (92%) enrolled in the current OL extension phase: 39/48 (81.3%) were extension phase completers and 9/48 (18.8%) discontinued prematurely, 4.2% due to adverse events, 4.2% due to insufficient clinical response, and 10.4% due to miscellaneous other reasons. For patients entering the extension study, mean MADRS total scores at DB baseline for lurasidone (n=29) and placebo (n=19) were 32.3 and 34.5, respectively; and mean MADRS total scores at week 6 (OL baseline) were 15.0 and 24.1, respectively Mean change from OL baseline to week 12 (OC/LOCF) in MADRS total scores for the Lur-Lur group was -4.1/-3.3, and for the Pbo-Lur group was -11.2/9.7. In the OL study, adverse events (≥5%) on lurasidone were akathisia (10.4%), diarrhea (8.3%), upper respiratory infection (8.3%), and headache, sedation, nausea, fatigue (6.3% each). For the Lur-Lur group, median change from DB baseline to week 12 (observed case) were as follows for metabolic parameters: cholesterol (-6.5 mg/dL), triglycerides (-3.5 mg/dL), and HbA1c (+0.15%). For the Pbo-Lur group, median change from OL baseline to week 12 (observed case) were as follows for metabolic parameters: cholesterol (+11.5 mg/dL), triglycerides (+8.0 mg/dL), and HbA1c (+0.20%). There were no clinically significant changes in body weight. During the OL phase, treatment-emergent mania or hypomania occurred in 2 patients (4.2%); and 2 patients had treatment-emergent suicidal ideation; there were no suicide attempts. Conclusions: Treatment with open-label, flexible-doses of lurasidone (20-60 mg/d) was generally safe and well-tolerated for up to 12 weeks in patients with MDD with mixed features. Continued improvement in depressive symptoms was observed.

No. 47

Associations Between Emotion Regulation, Posttraumatic Stress Subscales, and Risky Behaviors in Adolescents

Poster Presenter: Jennifer Herring
Co-Authors: Erica Gottlieb, Brandon Johnson, M.D., Emma Kirschner, Sara Schiff, Shilpa Taufique, Ph.D.

SUMMARY:

Background: Clinical interventions targeting post traumatic stress in adolescents typically highlight the pervasive difficulties in emotion dysregulation and risk taking behaviors that occur in these populations. However, there remains a dearth of research investigating relations between emotion regulation, PTSD and risky behaviors in these populations. More has been done to highlight the relation between PTSD and emotion regulation in adults (Tull et al, 2007). Specifically, aspects of emotion regulation strategies have been differentially linked to PTSD in adults. Lack of emotional clarity and limited access to emotion regulation strategies was linked to higher levels of post traumatic stress in a recent study of adult refugees (Doolan et al, 2017). Emerging literature extended these findings to adolescents finding meaningful relationships between various aspects of emotion regulation and psychiatric symptoms (Neumann et. al, 2010). However, these studies have not investigated the relations between emotion regulation skills, post traumatic stress and risky behaviors in adolescents. Methods: Thirty five adolescents receiving treatment in an intensive day treatment setting for mental health and substance use problems participated in the study. Participants completed assessments of emotion regulation skills (Difficulties in Emotion Regulation Scale; DERS), post-traumatic stress disorder symptoms (UCLA PTSD Index) and adolescent risk behaviors. Results: Preliminary analyses of PTSD and emotion regulation found all five DERS scales to be positively associated with PTSD Total Scale (r=.82). In analyzing subscales of PTSD, re-experiencing/intrusive thoughts were associated with all emotion regulation subscales (r=.77). Avoidance symptoms were associated with

the following subscales: nonacceptance (r=.58), difficulties engaging in goal directed behavior (r=.34) and access to emotion regulation strategies (r=.55). Negative mood/cognitions and hyperarousal subscales were associated with all of the subscales with the exception of emotional awareness (r=.70; r=.81). Last, frequency of high risk behaviors was not associated with PTSD or DERS scales. Conclusions: This study expanded research linking emotion regulation and PTSD symptoms in adolescents. PTSD symptom subscales were consistently associated with difficulties in the subscales of emotion regulation except for emotional awareness. Emotional awareness, as measured by the DERS, may indicate an area of widespread difficulty amongst adolescents and not correlate specifically to PTSD symptomatology. Furthermore, avoidance symptoms associated with few emotion regulation difficulties suggesting that avoidance of emotional experience may lead to less insight/understanding of emotion regulation processes. Significantly, risky behaviors were not associated with PTSD and emotion regulation in our population potentially because the majority of adolescents reported a high level of these behaviors.

No. 48

Providing Patients Access to Personalized Health Care Through Accessible Youth-and-Provider-Friendly Technology: A Qualitative Feasibility Study

Poster Presenter: Samantha Russell
Co-Authors: Sarosh Khalid-Khan, M.D., Pappu Srinivasa Reddy, M.B.B.S., Salinda Horgan, Ph.D.

SUMMARY:
Communication between patients and specialized care providers outside of scheduled appointments can often be arduous. Increased use and access to the internet on mobile and web-based devices have great clinical potential to facilitate exchange between patients, and providers [1]. However, the vast majority of these technological platforms have not been rigorously tested [2]. The purpose of this study is to assess the feasibility, utility and accessibility of a novel mobile-application (IMTEEN) and web-based portal suitable for use in clinical care provision that seeks to increase patient engagement, enhance communication, and reduce barriers affiliated with face-to-face care. Eligible participants included of youth, (14 to 25) with a diagnosis of ADHD, anxiety or depressive disorder, and providers (physicians and inter-professional staff) at Pathways for Children and Youth (Community), Kingston Family Health Team (Primary), and Hotel Dieu Hospital (Tertiary) in Kingston, Ontario. Youth (n=61) and providers (n=12) engaged with the mobile-app or web-portal regularly. Focus groups and individual interviews were conducted with youth (n=20) and providers (n=10) to discuss interface navigation, convenience, promptness of response to user service queries, and assistance in management of mental health. Key themes emerged highlighting the importance of innovative technology as a potential facilitator to improve quality, access, safety, and efficiency of healthcare delivery. This project meets the needs of today's population by introducing the opportunity for virtual health while reducing stigma, eliminating barriers to treatment such as limited access due to travel demands, social anxiety, and parking costs, all the while accessing specialists in the field.

No. 49
WITHDRAWN

No. 50

A Case of Withdrawal-Emergent Dyskinesia After Acute Discontinuation of Risperidone

Poster Presenter: Maanvi Kumar
Co-Authors: Richard Mattison, Raman Baweja

SUMMARY:
Introduction: Withdrawal-emergent dyskinesia (WED) is a hyperkinetic movement disorder involving abnormal involuntary movements that appear shortly after a rapid dose reduction or sudden discontinuation of an antipsychotic medication, in a portion of patients who do not display abnormal involuntary movements while on the medication(1). Here we report a case of WED after acute discontinuation of a higher dose of risperidone. Case Report: This is a 9-year-old male with diagnoses of Autism Spectrum Disorder (ASD) and ADHD, combined type. He also had history of irritability and physical aggression associated with ASD, which led to his first psychiatric hospitalization at age 5 where he was started on risperidone 1mg. Over the next couple of years, risperidone was gradually increased

to 4mg. He was also started on dexmethylphenidate-ER 20mg daily, dexmethylphenidate 7.5mg in divided doses and clonidine 0.2mg daily for ADHD symptoms. He was doing reasonable well for the next 2 years on the combination of ADHD medications and higher dose of risperidone. However, he developed hyperprolactinemia (40ng/mL; normal range 8-12ng/mL) and associated galactorrhea. Risperidone was tapered and discontinued over a period of 4 days. Within the next 5 days he developed abnormal involuntary movements including lip smacking, eye blinking, body rocking and shakes, and writhing movements of the neck; these caused significant distress and impairment. He did not respond to trials of oral benztropine, lorazepam and diphenhydramine. As he presented with acute onset severe symptomatology, he was admitted for medical work up including MRI brain, CBC, CMP, TFT, ESR, CRP, antinuclear antibodies, CSF analysis, Anti NMDA, anticardiolipin and paraneoplastic panels all proved negative. On hospital day1 he was restarted on risperidone 1mg twice daily; he responded within 24 hours and there was substantial improvement in abnormal movements. He continued to improve clinically and was discharged home on hospital day5 on risperidone 1 mg twice daily. Then risperidone was gradually tapered and discontinued over a period of 8 months without recurrence of withdrawal dyskinesia. Discussion: The nature of the onset of symptoms, temporal relationship with acute discontinuation of risperidone, rapid improvement of symptoms after resuming risperidone, and no clear evidence of other probable etiologies, implicated a case of WED after acute discontinuation of higher dose of risperidone. WED should be considered in the differential diagnosis in any patient presenting with involuntary movements after dose reduction, or acute discontinuation of medications(2). A gradual taper of the medication is recommended in all patients who take these medications over the long-term. It is possible that, in this case, neurodevelopmental disorders were a risk factor for development of WED. Future studies should focus on identifying risk factors or predictors for WED, so treatment plan can be tailored accordingly.

No. 51

The Comparison of Cortical Thickness of Resilient and Non-Resilient Adolescent Girls With a History of Sexual Abuse

Poster Presenter: Ali Saffet Gonul, M.D.

SUMMARY:

Adolescence is an important time period for brain development, and it was shown that negative environmental factors during this period might have lifelong impacts and increase the vulnerability to psychiatric diseases. One way to understand how the negative environmental factors increase the vulnerability is to study the structural alterations in the brains of the exposed populations. In this study, we investigated the structural alterations in a group of adolescent girls who had a history of sexual abuse. By including the traumatized-adolescences who has not present any psychiatric disorders since the trauma, we could compare the resilient and non-resilient adolescents in traumatized groups. Thirty-four adolescent girls who had a history of sexual abuse and 26 age matched controls were included in the study. Twenty-seven of traumatized adolescents had psychiatric disorders (past or current) including post-traumatic disorder and depression while 17 subjects did not report any disorders. After the structural brain scanning was completed with 3T MRI, all images were processed and analyzed by Freesurfer software. Univariate Analysis of Variances (ANOVA) with age and total intracranial volume as confounding factors was used for group comparison. Compared to controls and resilient adolescents, non-resilient subjects had reduced cortical thickness in the left lateral orbitofrontal cortex, transverse cortex, paracentral cortex; and the right superior temporal cortex, precentral cortex. Overall mean left hemisphere cortical thickness of non-resilient subjects were reduced compared to those of resilient and control subjects. The right inferior temporal cortex was thicker in resilient subjects compared to non-resilient subjects. Non-resilient subjects had a thinner cortex over the left insula, pre- and postcentral regions compared to those of controls. Both resilient and non-resilient groups had larger right hippocampal volumes compared to controls. Our analyses revealed that resilient and non-resilient adolescent girls have a different cortical thickness pattern. Non-resilient subjects have reduced cortical grey matter in emotion

generation areas (e.g. insula, temporal cortex) and emotion regulation areas like orbitofrontal cortex. Furthermore, our finding of the reduced cortical thickness at somatosensory areas of non-resilient subjects was in line with previous studies suggested thin cortex might be related to altered sensory perception specific to abusive experience. Our finding of the larger right hippocampus in both resilient and non-resilient traumatized adolescents suggests a positive association between trauma and hippocampus volume. As this finding is in contrast to previous studies, it needs further investigation.

No. 52

Case Series: Presentation of Internet Gaming Disorder in Adolescent Inpatients

Poster Presenter: Alma Spaniardi, M.D.

SUMMARY:

Summary: Internet Gaming Disorder has been included in the DSM-5 section III as a condition warranting further study. This disorder attempts to describe individuals who play internet based games compulsively leading to impairment in social and school/vocational functioning, as well as experience of withdrawal symptoms. The following cases demonstrate the presentation of Internet Gaming Disorder on an adolescent inpatient unit, highlighting the association with psychiatric comorbidities, high level of social dysfunction and the importance of including family in treatment. Case: 1) 17 year old Caucasian male, senior in high school, with past psychiatric history of anxiety and depression, presenting with school refusal, videogame playing of 12 hours per day and agitation when his father attempted to limit his computer use. On the unit he was hesitant to leave his room stating that groups made him anxious and expressed distress that he was not able to play videogames while hospitalized. He had been on Fluoxetine 60mg daily for 3 months with little improvement so he was cross titrated to Sertraline. By time of discharge the patient had an easier time attending groups, reported improved energy and sleep and was more social with peers. There was a plan to re-enter school and obtain a part-time job. 2) 15 year old Asian male in 9th grade special education with past psychiatric history of Autism Spectrum Disorder, ADHD and anxiety in outpatient treatment on Methylphenidate CR and low dose Sertraline presenting for hospitalization after threatening to stab his parents after they took his computer away. He had been playing videogames 3 -5 hours per day on weekdays and 5-10 hours per day on weekends. During the hospitalization the patient was reluctant to attend groups and interact with peers. He was oppositional and resistant to engage in therapy, expressing boredom with activities other than gaming. He did eventually produce a schedule for home containing varied activities. During the hospitalization sertraline was titrated to a therapeutic dose. Conclusion: Both patients were hospitalized following aggression when computer time was limited. Anxiety and social difficulties were prominent features in the presentations. Neither patient was involved in extracurricular activities and both had a decline in grades. There was marked distress at the lack of internet gaming on the unit. Treatment included medication management of comorbid disorders. Individual and group therapy consisted of motivational interviewing and Cognitive Behavioral Therapy techniques. The patients were encouraged to pursue varied activities and expand their friendships. The focus of family sessions was creating structure for the patient at home, as well as supporting parents in limiting computer time. Ultimately, both families were able to agree to a plan which included detailed weekday and weekend schedules with a set wake-up and bedtime, study time and limited electronics time.

No. 53

“No Se Que Vamos a Hacer”: Managing Schizophrenia in an Undocumented Immigrant Child With Parents Facing Deportation

Poster Presenter: Ann Le
Co-Author: Michael Epstein

SUMMARY:

A 17-year-old male with a diagnosis of disorganized schizophrenia has been followed by a psychiatric treatment team in an outpatient county facility for nearly two years. He presented with multiple negative symptoms including flat affect, thought blocking, social withdrawal, and neglect of personal hygiene, as well as a drop in school performance starting in 2015. His parents provide significant support, including transportation to clinic visits,

participating in therapy sessions, administering medication, and coordinating behavioral interventions (eg. encouraging social activities, engaging with the school). His older sibling provides social and emotional support as well. Over the course of treatment, which has included medication and psychotherapy, the patient has shown improvements in his symptoms. However, challenges remain as his mental health and care coordination are impacted by his family's immigration status. The patient, his parents, and his sibling are undocumented Peruvian immigrants who have been in the United States since 2003. His parents have been undergoing court proceedings in an attempt to avoid deportation, of which the patient is aware. His older sibling is a college-enrolled recipient of the Deferred Action for Childhood Arrivals (DACA) program. His parents' potential deportation and the tenuous status of DACA are sources of stress for the patient and his family and risk derailing the patient's progress. A growing body of literature suggests that undocumented status and deportation negatively impact the health and wellbeing of undocumented families, with children experiencing distress, anxiety, trauma, and barriers to education [1,2, 3, 4]. This poster reviews the current and projected management for the patient as well as challenges to mental health and care coordination posed by the impact of structural-level decisions on the patient and his family.

No. 54

Adult Outcomes of ICD-10 Hyperkinetic Disorder in the Multimodal Treatment Study of ADHD (MTA)

Poster Presenter: Arunima Roy

SUMMARY:

Background: Diagnostic criteria differ for the DSM-5 based Attention/Deficit-Hyperactivity Disorder (ADHD) versus the ICD-10 based Hyperkinetic Disorder (HKD) [1-2]. In a previous study from the MTA [3], it was shown that 25% of the MTA children qualified for ICD-10 diagnosed HKD and responded better to stimulant medication than other cases of ADHD. How an HKD diagnosis affects long-term outcomes, compared to DSM-5 ADHD diagnosis, is not known. Objective: To assess the long-term outcomes of a childhood ICD-10 based HKD diagnosis Methods: The MTA included 579 children aged 7-10 years who were randomized to one of four treatment groups for 14 months. Of the 579 children in the MTA, 145 could be diagnosed as having HKD with ICD-10 criteria. Following the 14-month treatment regimen, the MTA continued for 16 years as a naturalistic observational study. The current study is based on the 476 participants who were followed into adulthood. Baseline HKD status of participants was assessed using the HYPESCHEME algorithm [4]. Adult ADHD was diagnosed using DSM-IV, DSM 5 and norm-based criteria. Functional outcomes in adulthood were assessed using self-reports, Diagnostic Interview Schedule, Neo Five Factor Inventory, Conners' Adult ADHD Rating Scale, and the Substance Use Questionnaire. Medication use through childhood and adolescence was assessed with the Services for Children & Adolescents - Parent Interview. Results: Using ICD-10 criteria, 109 adult follow-up participants had been diagnosed with HKD at baseline. The group with childhood HKD had a higher attrition rate than the rest of the MTA sample. No differences were found between participants with and without baseline HKD in DSM or norm-based adult ADHD diagnoses. Further analyses showed that participants with comorbid internalizing disorders, excluded by the ICD-10 criteria from being labelled as HKD, had higher rates of adult ADHD than other participants with HKD. Exploratory analyses showed that in both HKD and non-HKD subgroups, comorbid internalizing problems were associated with greater adult ADHD persistence. Functional outcomes differed between the HKD and non-HKD groups only for a few domains: participants with HKD had higher job losses, medication use, and lower emotional lability compared to those with no HKD. These functional differences persisted on reclassifying the ICD-10 based group and adding participants with comorbid internalizing problems to the HKD subgroup. Conclusions: A baseline diagnosis of HKD, compared to other cases of ADHD, does not predict greater adult symptom persistence or poorer functional outcomes despite its greater initial symptom severity. Comorbid internalizing disorder, currently an exclusion criterion for an HKD diagnosis, is more predictive of a poor adult outcome. In the revision of ICD, some consideration should be given to inclusion

of the severely needy group with both HKD and internalizing comorbidity.

No. 55

Falling Through the Cracks: A Case of Stimulant-Induced Psychosis in a Child With Undiagnosed Autism Spectrum Disorder

Poster Presenter: Alexis E. Tchaconas
Co-Author: Timothy R. Kreider, M.D., Ph.D.

SUMMARY:

CJ is a 13-year-old Ecuadorian-American male, living with his mother who has limited English proficiency, enrolled in 7th grade with 504 accommodations, with a history of language delay without early intervention, and with stimulant treatment for attention-deficit/hyperactivity disorder (ADHD), predominantly inattentive presentation, who presents to the emergency department with a 2-week history of command auditory hallucinations, increased social withdrawal, distractibility, and insomnia. Three weeks prior to admission, his dose of mixed amphetamine salts was increased to target long-standing poor academic functioning attributed to ADHD. Due to the new-onset psychotic symptoms, this medicine was stopped 2 days prior to his admission to the adolescent psychiatry unit. On admission and throughout the hospital course, he denied any auditory hallucinations and showed no other sign of psychosis, leading the team to diagnosis stimulant-induced psychotic disorder. This extreme reaction to a modest dose (15 mg) of stimulant medication, combined with his history of language delay and exam notable for poor eye contact and impaired pragmatic language, prompted the team to consider alternative explanations for his chronic impairment. Through an extended, interpreter-mediated interview with the patient's mother, she detailed a history of stereotyped behaviors, sensory hypersensitivity, restricted patterns of behavior and fixed interests that he had exhibited since age 3. This developmental history, his ongoing difficulties with social communication and interaction as described by school informants, and observations on exam suggested that the diagnosis of autism spectrum disorder (ASD) better explained his social and academic impairment than did ADHD. In this poster, we explore barriers to accurate diagnosis of ASD, many of which were present in this case, and consequences of misdiagnosis.

No. 56

A Comparative Study of Resting-State Functional Connectivity in First-Episode Drug-Naïve Adolescents With Major Depressive Disorder

Poster Presenter: Jeonho Lee
Co-Authors: Yujin Lee, Jongha Lee, Sangwon Park, Moonsoo Lee

SUMMARY:

Major depressive disorder (MDD) is a leading cause of disability and frequently emerges during adolescence. Because of the significant brain maturational changes that occur during adolescence, the brain abnormalities in adolescent with MDD are likely to be different from those in adults with MDD. However, neurobiological studies in adolescents are lacking compared to adults. Functional connectivity-based MRI recently has been used to localize functional connectivity abnormalities in affective disorder, and to identify connectivity patterns that predict treatment response, as well as clinical measures of illness severity. The primary goal of the present study was to examine fronto-limbic circuit and DMN resting state functional connectivity (RSFC) in adolescents with MDD and in HCs. To minimize the impact of other illness course and medication exposure, we have only chosen a drug-naïve patient. Resting-state functional magnetic resonance imaging (rs-fMRI) data were acquired from 23 first-episode drug-naïve adolescents aged 13 to 18 years with MDD (male 9, female 14, mean age 15.4) and 27 healthy adolescents with no previous psychiatric diagnoses (male 5, female 22, mean age 15.9). ROI-to-ROI RSFC analyses were performed using the CONN toolbox. This study was conducted from April 2015 to August 2016. The MDD group demonstrated lesser RSFC relative to healthy controls (HC) in 1) dorsal anterior cingulate cortex (dACC) with anterior default mode network (DMN), 2) precuneus with salience network (SN) and 3) anterior DMN with SN. Abnormal functioning of these areas may contribute to emotional dysregulation and maladaptive cognitive patterns which are prominent clinical features of MDD. These findings, which are in alignment with previous studies that resting-state abnormalities in fronto-limbic circuit and DMN

regions in adolescent MDD patients, support recent models of depression, that emphasize the importance of medial network disturbances.

No. 57
WITHDRAWN

No. 58
The Clinical Correlates of Working Memory Deficits in Youth With ADHD: A Comprehensive Literature Review and Controlled Study
Poster Presenter: Ronna Fried
Co-Authors: Joseph Biederman, Barbara Storch

SUMMARY:
Background: ADHD is associated with a significant over-representation of working memory (WM) deficits. WM refers to the ability to hold information in mind for use in complex tasks. Because of its importance, it can be expected to have a wide range of adverse functional consequences when impaired. Yet the scope of adverse outcomes of WM deficits in ADHD has not been adequately investigated. Methods: We conducted a search of the scientific literature on WM deficits, and Freedom from Distractibility (FFD), in ADHD using PubMed and PsycInfo databases. To be included in our review, we restricted the literature to studies that met the following criteria: 1) operationalized diagnosis of ADHD; 2) psychometric assessment of working memory; 3) utilization of healthy controls; and 4) operationalized assessment of functional outcomes. Secondly, we compared functional outcomes of WM deficits using data from a large sample of children with and without ADHD of both sexes ascertained from psychiatric and pediatric sources stratified by the presence or absence of WM deficits. Working memory was assessed using the WISC-R Freedom from Distractibility (FFD) factor based on Digit Span, Arithmetic and Coding. Results: The final literature review included 11 controlled studies of WM/FFD deficits in ADHD with operationalized assessment of outcomes in academic, social, and emotional areas. WM assessment was divided into auditory-verbal memory (AVM) and spatial-visual memory (SWM). Seven studies examined WM deficits in academic functioning, eight studies assessed WM deficits in social functioning, and three assessed WM deficits in psychopathology. The controlled study found that significantly more youth with ADHD had WM deficits than controls (31.9% vs. 13.7%, P< 0.05) and, in ADHD children, their presence was significantly ($p<0.01$) associated with an increased risk for grade retention, placement in special classes, and lower scores on reading and math achievement tests relative to ADHD subjects without WM deficits. In contrast, no other differences were noted in other areas of functioning. Although WM deficits also had some adverse impact on educational and cognitive correlates in non-ADHD Controls, these differences failed to attain statistical significance. Conclusions: Most of the literature review suggested that WM deficits affect primarily academic functioning. The controlled study mirrored this finding, documenting that WM deficits significantly increased the risk for academic deficits (including grade retention, placement in special classes, and lower academic achievement) in children with ADHD beyond those conferred by ADHD. Given the high morbidity and disability associated with academic dysfunction, more efforts are needed to help identify WM deficits in individuals with ADHD. Additional research is needed to help characterize the impact of WM deficits in individuals with ADHD and develop appropriate interventions to help address them.

No. 59
A Double Case Review: Ehlers Danlos Syndrome and Psychiatric Illness
Poster Presenter: Amie Ford
Co-Authors: Tracy Barry, Yashavanth Bangalore

SUMMARY:
Ehlers Danlos Syndrome is a heterogeneous hereditary condition that affects connective tissues giving the characteristic phenotype of hypermobile joints. There is a growing evidence base to suggest that EDS has a preponderance for mental health issues, most commonly anxiety type states and depression and a large number of patients with EDS will have more than one diagnosis. Cases JV is a 32-year-old gentleman with a diagnosis of Paranoid Schizophrenia and a diagnosis of EDS. This patient is known to Mental Health Services having had multiple admissions and was poorly concordant to oral medication. JV had told his parents that he is receiving messages from the devil, he acts aggressively towards his father and has paranoid

thoughts about food and drink. JV had pain in his right arm for many months prior to recent admission in August 2017 which had been left unexplained despite several A&E attendances. He has a strong family history of Arthritis and EDS on his maternal side. Whilst on the ward he remained isolated and positioned his arm as if it were in a sling. His mental state improved on long acting injectable antipsychotic medication and was discharged to the care of the Home Treatment Team (Crisis Resolution Team). AK is a 27year old lady known to mental health services with a history of emotional unstable personality disorder, dependant personality disorder, cyclothymia for which she takes Quetiapine with some effect. AK is known to have EDS. Her main symptoms are hypermobility and worsening joint pain following a fracture. AK's EDS required her to stop working and claim social assistance. AK has a history of violent self-harm with the intent to end her life and was admitted to in patient care on an informal basis to manage the acute risk. Her mental state improved whilst under the care of the Home Treatment Team. CONCLUSIONS Upon reviewing cases such as these, it highlights the importance of effective working from a multidisciplinary approach in order to tailor treatment plans to best suit the patients' needs to promote the best outcomes and reduce the risk of acute relapse. We would like to draw particular attention to the need of keeping the whole patient in mind when treating their mental health issues.

No. 60

Examining Initial Assessment Appointment No Show Rates for Patients With Severe Mental Illness in a Community Mental Health Clinic

Poster Presenter: Arter Biggs, M.D.

SUMMARY:

Background: A lack of timely access to mental health services for patients with serious mental illness (SMI) can lead to adverse outcomes including increased psychiatric hospitalizations, decompensation, and risk for suicide. Additionally, patients with SMI may experience increased rates of missed appointments (no-shows) interfering with timely access to care. Individual factors including gender, dual diagnosis status, age, race and education have been linked to appointment adherence among SMI patients. Within our own specialty mental health setting, we have created a triage system designed to enhance timely access to care: the Same Day Assistance (SDA) program. Within SDA, walk-ins are triaged to determine level of care and those with SMI are then scheduled for a full assessment with a mental health provider who enrolls them in ongoing care. In spite of this triage system, many patients with SMI fail to successfully attend their first full assessment and are therefore never connected with psychiatric services. Methods: This is a descriptive study characterizing patient and appointment characteristics associated with no-showing to an initial mental health assessment. We will compare patients with SMI who no-showed with those who successfully attended their assessment. Our study sample includes all individuals with SMI who walked-in to our community mental health clinic seeking mental health services in a 12-month period. We will draw from an existing SDA clinic registry that includes appointment data. We will supplement this existing registry with patient demographic data abstracted from our electronic medical record system (EMR). We will run t-tests and chi-square models to elucidate differences between those who attended their assessment appointments and those who did not. We aim to determine whether diagnosis, demographic characteristics, and or time between appointments are associated with assessment attendance. Results: Our data set includes approximately 500 patients who walked-in to our SDA clinic in our 12-month study period. We are currently in the process of linking demographic (age, gender, race/ethnicity) and diagnostic data with appointment attendance. Data collections and analysis will be completed in time for presentation of final results at the American Psychiatric Association conference in May 2018. Conclusions: Identifying individual characteristics associated with missed appointments can inform tailored outreach efforts and may increase access for SMI patients who are least likely to connect to care. By better addressing safety concerns and adverse outcomes in this population, clinical systems can reduce hospitalizations, lower costs and channel resources toward prevention.

No. 61

Correlation of Catatonia and Viral Infection: A

Series of Cases and Literature Review
Poster Presenter: Aimy Rehim, M.D., M.P.H.
Co-Authors: Charles Mormando, D.O., Adeeb Yacoub

SUMMARY:
Background: Catatonia has been a well-documented phenomenon in literature as a feature of psychiatric disorders and organic disorders. It has been linked as a manifestation of several viral infections including HIV, NDMA receptor encephalitis, and Dengue Fever. We present a case series observed in a university hospital setting of catatonia and viral infections. One case of Epstein Barr Virus (EBV) and two cases of Herpes Simplex Encephalitis (HSV). Method: PubMed Review of catatonia and viral infection for past 50 years. Use of Bush-Francis Catatonia Rating Scale (BFCRS) for measurement of catatonic signs and symptoms. Case Presentations: Case 1: A 19 year old Caucasian male with no psychiatric history presented to the university hospital with catatonic signs including mutism, staring, withdrawal, and immobility. All laboratory work and radiological findings were within normal limits (WNL) except EBV titer being positive. Diazepam was given prior the lumbar puncture which showed improvement in catatonic signs. Patient was discharged home on lorazepam with significant improvement to his medical condition. Case 2: A 79 year old Caucasian male with no psychiatric history, high functioning at baseline, medical history of diverticulitis, diagnosed with herpes encephalitis complicated by seizures, respiratory failure, and pneumonia. Psychiatry consulted for delirium. During our evaluation, he presented with catatonic signs including rigidity, negativism, automatic obedience, staring, mutism, and stereotypy. There was minimal response to the lorazepam challenge. Patient was eventually discharged to a nursing home. Case 3: An 84 year old female with no psychiatric history, but significant medical history of hypertension and cerebrovascular accident in usual state of health prior to presentation after fall secondary to syncopal episode. Patient had altered mental status at presentation to the university hospital with labs being WNL except that the encephalitis panel was positive for HSV. Catatonic signs on BFCRS observed included immobility, mutism, staring, posturing, catalepsy, rigidity, negativism, withdrawal, and autonomic abnormality. A lorazepam challenge was not given. Patient was intubated and remained in the medical intensive care unit. Prognosis remained poor and patient was discharge to hospice care. Discussion: It is noted through the review of the literature that viral infections have been related to catatonic presentation, but this is the first case series including both EBV and HSV Encephalitis. There are frequent complications related to the immobility of catatonia including dehydration, malnutrition, deep vein thrombosis, further infection such a pneumonia. Catatonia is considered to be an illness that is treatable although can be complicated in the medical. This case series elucidates the importance of recognizing catatonia in the setting of viral infection in an effort to reduce patient morbidity and mortality.

No. 62
Cariprazine for the Treatment of Bipolar Mania With Mixed Features: A Post Hoc Pooled Analysis of 3 Trials
Poster Presenter: Prakash S. Masand, M.D.
Co-Authors: Roger S. McIntyre, M.D., Yan Zhong, Gyorgy Nemeth, Balazs Szatmari, Willie Earley, Mehul Patel

SUMMARY:
Patients with bipolar I disorder (BP-I) who have manic or depressive episodes with mixed features experience increased complications, including greater suicide risk, psychotic symptomatology, comorbidities, and time to remission. Commonly prescribed antidepressants are often ineffective in the treatment of episodes with mixed features, and can trigger manic episodes. Cariprazine, a potent dopamine D3 and D2 receptor partial agonist with preferential binding to D3 receptors, is approved for treatment of BP-I manic and mixed episodes based on 3 phase II/III clinical studies (NCT00488618, NCT01058096, NCT01058668). Post hoc analyses of data from these studies evaluated the efficacy of cariprazine (versus placebo) in patient subgroups with mixed features using the DSM-5 specifier and two more broad definitions. Data from randomized, placebo-controlled 3-week trials were pooled. The cariprazine dose was 3-12 mg/d (flexible) in 2 studies, and 3-6 mg/d or 6-12 mg/d (fixed/flexible) in the other. Inclusion criteria included total scores for Young Mania Rating Scale (YMRS) ≥20 and

Montgomery-Asberg Depression Rating Scale (MADRS) ≤18. A post hoc analysis was performed on patients with the DSM-5 mixed features specifier (≥3 depressive symptoms [DS]), and more broadly defined criteria: ≥2 DS and MADRS total score ≥10. Definitions were based on the number of manic patients with depressive symptoms below the DSM-5 threshold in the study. Efficacy assessments were change from baseline to Week 3 in YMRS and MADRS total scores, and rates of YMRS response (≥50% improvement) and remission (YMRS total score ≤12). Of 1037 pooled patients, 141 (13.6%) had ≥3 DS, 283 (27.2%) had ≥2 DS, and 453 (43.7%) had MADRS ≥10. Cariprazine treatment significantly improved mean YMRS score changes at Week 3 compared to placebo in each group; least mean squares differences (LSMD) were ≥3 DS: -3.78 (P<.05), ≥2 DS: -3.00 (P<.05), and ≥10 MADRS: -5.5 (P<.001). A greater proportion of patients met criteria for YMRS response and remission when treated with cariprazine vs placebo, which were significant for the ≥2 DS ([47% vs 34%; P=.035, and 39% vs 27%; P=.040), and ≥10 MADRS (57% vs 31%; P<.0001, and 44% vs 23%; P<.0001) response and remission, respectively, but not the ≥3 DS (response [43% vs 34%; P=.269] and remission [37% vs 26%; P=.170]). Depressive symptom improvement was numerically greater with cariprazine compared to placebo, but the results were only statistically significant for the ≥10 MADRS subgroup; MADRS change from ba

No. 63

Treating Major Depressive Disorder With OnabotA: Safety and Efficacy 24 Weeks Following a Single Injection Session

Poster Presenter: Armin Szegedi
Co-Authors: Suresh Durgam, Mitchell Brin, Arlene Lum, Lynn James, Jeen Liu, Michael Edward Thase, M.D.

SUMMARY:
Previous pilot studies reported antidepressant effects of injections of onabotulinumtoxinA (onabotA) into the corrugator and procerus muscles. Although the mechanism of action is presently unknown, one current hypothesis, the facial feedback hypothesis, postulates that onabotA treatment of overactive corrugator muscles, which are activated during negative emotions, may improve depressive symptoms. This study was designed to evaluate the safety and efficacy of onabotA vs placebo for MDD treatment in adult females (NCT02116361). This was a phase 2 multicenter randomized double-blind placebo-controlled 24-week study. Eligible participants were females (18-65 years) with moderate to severe MDD (DSM-IV-TR criteria), a current depressive episode ≥4 weeks, HAMD17 ≥18 and CGI-S ≥4. Patients (N=255) were randomized to onabotA 30 U (n=65),50 U (n=65), or matching placebo (30 U [n=58] and 50 U [n=67]). As the number of injections differed between doses, participating sites were randomly assigned one dose group. Corrugator and procerus injections were administered in a single treatment session (Day 1). Efficacy was measured using MADRS (primary endpoint at Week 6), CGI-S, and HAM-D17 scales up to 24 weeks following treatment. AEs, routine laboratory tests, vital signs, and suicide risk were monitored. For the 30 U dose group, a numerically greater MADRS reduction from baseline compared with placebo was observed, and differences reached P<0.05 (2-sided) at several time points up to Week 15 (range: -3.3 to -5.1 points), but not for the primary endpoint, Week 6. Similarly, consistently numerically greater score decreases from baseline vs placebo occurred with onabotA 30 U using CGI-S and HAM D17 during the same period. The 50 U dose group did not separate significantly from placebo until weeks 18-24. Data

No. 64

Affective and Cognitive Reactivity to Mood Induction in Chronic Versus Episodic Depression

Poster Presenter: Anne Guhn
Co-Author: Stephan Köhler

SUMMARY:
Background: Despite the high clinical and epidemiological relevance of chronic depression (CD), little is known about its specific psychopathology and whether it is distinct from episodic forms of depression (ED). As compared to ED, CD has been associated with more childhood maltreatment, an earlier age of onset, and higher treatment resistance. A therapeutic approach that was developed specifically for CD, the Cognitive Behavioral Analysis System of Psychotherapy

(CBASP), is based on the assumption of altered affective and cognitive reactivity in CD. However, whether these alterations are indeed specific to CD or rather represent general features of depressive disorders is still unknown. Methods: Two studies were conducted that investigated reactivity to a sad mood induction in three samples, i.e. CD and ED as well as a healthy control sample (n=15 per group and per study). In Study 1 a general mood induction was used (affective pictures in combination with sad music), while in Study 2 mood was induced by auditory scripts of autobiographical content (individualized mood induction, negative and neutral). Affective and cognitive reactivity were assessed with the Positive and Negative Affect Schedule (PANAS) and the Dysfunctional Attitude Scale (DAS), respectively. Results: Regarding general mood induction (Study 1) the two depressive subtypes differed in affective reactivity: CD was associated with blunted susceptibility to emotional stimuli, while ED demonstrated an affective response that was comparable to HC. In contrast, individualized mood induction (Study 2) increased both affective and cognitive reactivity specifically in CD patients. Conclusions: The present results highlight affective and cognitive reactivity as important psychopathological features that differ between chronic and episodic depression. Our findings provide first empirical evidence supporting the theoretical framework of CBASP and suggest that psychotherapeutic interventions should integrate specific strategies that focus on affective and cognitive reactivity, especially in the treatment of CD.

No. 65

Efficacy and Safety of Intranasal Esketamine Plus an Oral Antidepressant in Elderly Patients With Treatment-Resistant Depression

Poster Presenter: Rachel Ochs-Ross, M.D.
Lead Author: Jaskaran Singh, M.D.
Co-Authors: Ella Daly, Yun Zhang, Ph.D., Rosanne Lane, M.A.S., Pilar Lim, Ph.D., Karen Foster, B.S., David Hough, M.D., Husseini Manji, M.D., Wayne Drevets, M.D., Gerard Sanacora, M.D., Ph.D., Rupert McShane, M.D., Raphaël Gaillard, M.D., Ph.D.

SUMMARY:
Background: Estimates of 18-40% of elderly patients with depression suffer from treatment-resistant depression (TRD), defined as non-response to at least two antidepressants. Elderly patients experience greater disability and functional decline, decreased quality of life, and greater mortality from suicide than younger patients. Intranasal esketamine is being investigated for treatment of TRD. We evaluated the efficacy, safety, and tolerability of flexibly dosed intranasal esketamine (ESK) (28 mg, 56 mg or 84 mg) plus a newly initiated oral antidepressant (AD), compared with AD plus intranasal placebo (PBO), for the treatment of TRD in elderly patients. Methods: Patients =65 years of age (N=138) in this double-blind, multicenter, active-controlled study (NCT02422186) were randomized (1:1) to either ESK+AD (N=72) or AD+PBO (N=66). The primary endpoint was the change in the Montgomery–Åsberg Depression Rating Scale (MADRS) total score from day 1 (baseline) to the end of a 4-week double-blind induction phase. Statistical analysis employed mixed-effects model repeated measures (MMRM), with a weighted combination test to account for an interim analysis for sample size re-estimation, using a one-sided 0.025 significance level. Pre-specified subgroup analyses were performed for ages 65-74 years (n=116) and =75 years (n=21). Results: The mean (SD) patient age was 70.0 (4.52) years and mean (SD) baseline MADRS total score was 35.2 (6.16). The mean (SD) change in MADRS total scores from baseline to day 28 was -10.0 (12.74) for ESK+AD and -6.3 (8.86) for AD+PBO. Based on MMRM analysis, the median-unbiased estimate of the difference between ESK+AD and AD+PBO was -3.6 (95% CI: -7.20, 0.07; one-sided p=0.029). The age subgroup of 65-74 years showed a treatment difference favoring ESK+AD in pre-specified analysis. The difference in LS mean (SE) change at day 28 was -4.9 (2.04) for patients 65-74 years (one-sided p=0.009) and -0.4 (5.02) for patients ?75 years (one-sided p=0.465). The most common treatment-emergent adverse events (TEAEs) in the ESK+AD group were dizziness (20.8%), nausea (18.1%), headache (12.5%), fatigue (12.5%), increased blood pressure (12.5%), vertigo (11.1%) and dissociation (11.1%). The most common TEAEs in the AD+PBO group were anxiety (7.7%), dizziness (7.7%) and fatigue (7.7%). Conclusions: While treatment with ESK+AD did not demonstrate a statistically significant difference vs treatment with

AD+PBO using the weighted combination test on the primary outcome, a statistically signific

No. 66

Daydreaming and Depression: The Response to Stimulants

Poster Presenter: Suhayl Joseph Nasr, M.D.
Co-Authors: Julie Ann Coyle, M.D., Burdette Wendt

SUMMARY:

Background: Daydreaming is common in both childhood and adulthood. It is estimated to occupy up to 50% of waking thought. In children with ADHD, inattentive type particularly, it contributes to their distractibility. Stimulants are the standard treatment for ADHD, but there is no data on the preferential benefit of stimulants for depressed adults who also frequently daydreamed as children. Methods: A retrospective chart review was performed on patients in a private outpatient psychiatric clinic. Data collected included demographics, medication history, answers to how frequently they daydreamed in school on a psycho-social questionnaire given at their intake, PHQ-9 scores from each follow up visit, and their current diagnoses. Results: Over a three year period, 217 patients completed the initial questionnaire and had follow up visits. Of these, 80 reported they had daydreamed “frequently” or “continuously” as a child. Clinical depression was diagnosed in 67% of the continuous daydreamers, 44% of the frequent daydreamers and 23% of those who said they never daydreamed. ADD was diagnosed in 38% of of the continuous daydreamers, 32% of frequent daydreamers, and 16% of occasional or never daydreamers. At their most recent visit, 37% of continuous daydreamers were still depressed, compared with 16% of frequent daydreamers and 5% of non-daydreamers. When patients who continuously daydreamed were treated with stimulants, their depression remitted more effectively as measured by their PHQ-9 score at their last visit (5.8 vs. 12.9, p<.08, PHQ at intake of 16.4). Conclusions: Childhood daydreamers in this patient population were more likely to be diagnosed with depression in adulthood and more likely to respond to stimulants. There is increasing awareness that overlapping symptoms of what appear to be unrelated diagnoses may have the same biological origins and may thus respond to the same treatments. This data raises the possibility that there is shared neurocircuitry between daydreaming in childhood and later onset of depression. More work needs to be done to elucidate these possible connections and perhaps more effectively treat both depression and inattention.

No. 67

Diabetes and Bupropion in the Treatment of MDD

Poster Presenter: Suhayl Joseph Nasr, M.D.
Co-Authors: Julie Ann Coyle, M.D., Burdette Wendt

SUMMARY:

Background: The role of inflammation in the pathogenesis of multiple diseases is a relatively recent development in psychiatry and in medicine in general. Inflammation has been implicated in the development of type 2 diabetes and has also been linked to depression in these patients through the Dopamine pathways. Following is a study of the effect of Bupropion compared to SSRIs on the outcome of depression in diabetic patients. Methods: A retrospective chart review was performed on all diabetic patients with major depression in an outpatient psychiatric clinic. Data collected included demographic information, medication history, answers to a medical history questionnaire, current diagnoses, and PHQ-9 scores from every visit. Results: 862 office visits were collected, made by105 patients over 5 years. In diabetic patients diagnosed with Major Depressive Disorder, there was a statistically significant improvement in patients given Bupropion versus SSRI’s. At the last recorded visit patients on Bupropion had lower average scores than those not on Bupropion (8.1 vs. 10.1 at intake, p<.01). Patients on other medications improved less, with those on SSRIs having an average score of 8.9 vs 9.9 at intake, and those on SNRIs averaging 9.2 vs 9.9 at intake. Neither difference was significant. Conclusions: The Dopamine enhancing Bupropion was associated with a larger decrease in PHQ9 scores than other antidepressants. This study was limited by its small size, absence of data on inflammation markers status, and on the adequacy of diabetes control in these patients though the results are promising. More research needs to be done to see if Bupropion is more effective at treating depressed patients with other inflammatory illnesses as well. And certainly

the role of inflammation in depression itself needs to be more fully elucidated.

No. 68

Do PRITE Scores Matter?

Poster Presenter: Ahmad Hameed, M.D.
Co-Author: Usman Hameed, M.D.

SUMMARY:

Introduction: Residency programs put significant effort into recruiting the best candidates for their programs. A large number of candidates are interviewed and ranked according to their academic strengths as well as their programmatic fit. Research suggests that good performance on the Psychiatry Resident-In-Training Examination (PRITE) is closely related to the board pass rate. The purpose of this study was to ascertain if higher rank order in the candidacy evaluations predicted higher PRITE scores in subsequent years. Method: Programmatic rank orders for all residents admitted to the residency program between 2011 and 2014 (n=14) were correlated with the resident's subsequent PRITE percentile scores, which compare the resident's test performance in comparison with other residents at a similar level of training. Results: The Pearson' r correlation between a resident's programmatic rank order and their 1st year PRITE score was significant ($r(23) = -.47$, $p = .025$). The correlation between programmatic rank order and the 3rd year PRITE scores was of the same magnitude, although the finding was marginal due to the smaller sample size (Pearson's $r(14) = -.47$, $p = .09$). Further inspection of the data revealed that, at no point during this time did residents ranked lowest in their year score better than the highest rank residents. For the resident who were ranked in between the highest and the lowest positions on ROL the general trend of better performance on PRITE remained consistent with most of the higher ranked residents, but with less consistency. There were some residents who did shift positions in terms of percentile scores through their residency in relation to their relative rank on ROL. Discussion: Programs try to recruit the best candidates to their residencies. Resident's performance during their training is important for the programs. An important metric of their performance is their Board pass rates. Data strongly suggest a correlation between PRITE scores and American Board of Psychiatry and Neurology pass rates. These data suggest that programmatic ranking in some institutions may provide a reasonable estimate of PRITE performance. Although the correlations were consistent across 1st and 3rd year PRITE scores, a limitation of this study is the small sample size and the use of a single residency program. A larger sample of residents and residency training programs would increase confidence in this finding.

No. 69

Exploring the Relationship Between Pregnancy and Depression in Rural Guatemala: A Pilot Study

Poster Presenter: Ahmad Hameed, M.D.
Co-Author: Usman Hameed, M.D.

SUMMARY:

Introduction: 80% of the world's population lives in developing nations (DN). Females make up about half of this population. The female gender in DN is associated with higher rates of psychiatric disorders, especially when they have less education and low social class. A combination of factors leads to higher rates of pregnancies in the DN. We wanted to see if there was a relationship between depression and pregnancies in a rural population in a DN. Method: Our study was conducted at a rural health clinic catering to female patients. Patients who came to the clinic over a span of 3 days were asked if they were interested and willing to participate in a study. 23 (n) patients agreed to participate and were asked a list of questions which included the number of times they have been pregnant, number of lost pregnancies and the number of living children. These patients were also screened by a health care provider by utilizing HAM D. Results: Our cohort (n=23) completed a questioner and a HAM D. We were unable to finish HAM D on one patient per her request. After removing her information from our data set Pearson's r correlations were computed between the HAM-D ($M = 12.41$, $SD = 4.29$), number of current live children ($M = 3.77$, $SD = 1.60$), and the number of lost pregnancies ($M = .39$, $SD = .78$). We found that having more living children was associated with less reported depression ($r(20) = -.50$; $p = .02$), whereas number of lost pregnancies was not significant ($r(20) = -.17$; $p = ns$). The average age of our cohort was 39.8 years. Discussion:

Previous studies have shown that access to health care in the DN is limited. Access to mental health is even scarce. Studies also suggest that females living in DN are associated with higher rate of pregnancies and mental health issues. Studies also suggest that post partum depression in DN is associated with an increased risk of physical problems in the newborn children. We wanted to explore the relationship between depression and pregnancy. In our cohort we found that having more living children was associated with less reported depression ($r(20) = -.50$; $p = .02$). Rationale behind this relationship could be cultural, social, economic or a combination of all. Though our cohort was small (n=22) this is an important finding as it is contrary to previous reports and perception in the developed counties.

No. 70

MEWS Versus NEWS: What's the NEWS? Certainly Not the MEWS

Poster Presenter: Amie Ford
Co-Author: Tracy Barry

SUMMARY:

Aims and Objectives This study aims to analyse the effectiveness of the Modified Early Warning Score (MEWS) usage on a mental health inpatient ward with a view to implementing the National Early Warning Score (NEWS). The hypothesis is that MEWS will not be being used to its full potential. Also that NEWS should be implemented as an alternative to help with communication with physical health hospitals about physically deteriorating patients. Background When a patient becomes acutely unwell, time is of the essence. The faster a patient's deterioration in physical state is noticed, the faster the treatment can be administered and the prognosis will be drastically improved. These warning signs in combination have been formulated in many charts over time to highlight to non-medical staff that a patient may be becoming unwell and that a further assessment should be made. The key difference between the MEWS and NEWS is the scoring process and parameters of the vital signs and its escalation process. NEWS as this tends to be used more widely in physical health hospitals North East London Foundation NHS Trust (NELFT) was keen to use this innovation in a psychiatric in patient setting. Method A whole ward sample of MEWS charts from a 20-patient capacity general adult inpatient ward within NELFT were captured and analysed. With a total sample size of 89 opportunities to capture a MEWS score. The data was analysed to focus on the escalation process and whether it was being adhered to correctly, adequately or not at all. NEWS charts were subsequently introduced to the staff. In a bid to reduce communication errors when communicating with physical health hospitals by using the MEWS system, a package of computer based learning on NEWS was provided. After completion of the online module, all staff were asked to attend face-to-face teaching with a simulation training exercise. Results Out of a total 89 opportunities to record a MEWS score, 66 were recorded as 23 had been refused by patients. There were no over escalation at all throughout the data sample. Only 5 single instances out 66 recorded scores were completed correctly and escalated to the appropriate level. On 7 occasions the need for escalation was completely missed. Subjective reports from staff included ambiguous escalation process when using the MEWS scoring system. 100% of nursing staff completed electronic training and face to face teaching on the NEWS scoring system. Conclusion It can be seen that MEWS is of limited benefit for an in inpatient psychiatry setting as it has been shown to be prone to user error which could ultimately compromise patient safety and care. Both computer based learning modules and a face-to-face teaching in the correct use of NEWS was well received by staff. Further analysis is needed to confirm whether NEWS is in fact less prone to this user error and therefore a safer alternative with correct level of escalation.

No. 71

Significance of Identifying Cotard Delusions to Modify Treatment Modalities for Delusional Disorder

Poster Presenter: Mahtalash Hoque, M.D.
Co-Author: Sonia R. Parmar, M.D.

SUMMARY:

Background: The distinction between delusions and religious norms is oftentimes difficult to make. This study aims to investigate the possibility of a cultural origin of Cotard delusions and to determine the appropriate management. The significance of the

study is to be mindful of cultural norms and the potential role they play in the formation of Cotard delusions. Case History: A 67-year-old religious, Hispanic male was admitted to Internal Medicine service for worsening cough, fever, and confusion. The patient was diagnosed with pneumonia and successfully treated with antibiotics. Confusion, however, persisted with fixed beliefs revolving around his death for the past one month. Patient claimed that his bones were taken away from him, which led him to exhibit somnolence, anhedonia, and poor hygiene. Due to his strong beliefs regarding his death, the patient requested a spiritual healer to remove his physical body. Patient admitted to auditory hallucinations, specifically spirits stating, "your time is up". Past medical history revealed chronic substance use with herbal leaves for the past twenty years. Patient stated he used this herbal remedy based on his religious practices to cope with his prevailing beliefs of being dead. Management: Initial workup included complete blood count (CBC), basic metabolic profile (BMP), urine toxicology and head CT, which were all found to be normal. Goals of therapy were to (1) achieve functional control of beliefs and to (2) reinstate activities of daily living. Quetiapine fumarate 100mg BID was initiated as the primary anti-psychotic, in addition to Trazodone 50mg QHS and Mirtazapine 15mg QHS. Orientation exercises were implemented to help familiarize the patient to his surroundings. Delusions slowly abated over the course of five weeks. Patient, however, continued to exhibit negative symptoms and behaviour remained grossly disorganized. The decision to add electroconvulsive therapy (ECT) in conjunction with pharmacological therapy was made as the patient failed to improve. Eight sessions of ECT were conducted over the course of three months. Follow up after four sessions revealed rapidly improved mental status with increased socialization. Upon subsequent completion of eight sessions, patient achieved full remission of symptoms with no evidence of Cotard delusions. Discussion: Cotard syndrome is a rare psychiatric syndrome, where the core symptom is nihilistic ideation or delusion. As evidenced by this study, it is important as physicians to have a higher degree of clinical suspicion of Cotard delusions particularly in populations who have deeply rooted cultural or spiritual beliefs, which may prompt the use of ECT as an adjunctive treatment.

No. 72

Characterizing Treatment Resistant Anorexia Nervosa

Poster Presenter: Sarah Ann Smith, M.D.
Co-Author: D. Blake Woodside, M.D.

SUMMARY:

Introduction: Treatment resistance is a common problem in the field of eating disorders, yet there is no agreed upon definition of this phenomenon. Instead, it is hypothesized to be multifactorial with biological, social and psychosocial components. Many researchers consider treatment resistance as a component of severe and persistent or chronic anorexia nervosa, but there is limited research on what differentiates eating disorder patients who are able to complete treatment from those who are not. The purpose of this study was to explore this question by comparing demographic and clinical characteristics of patients with anorexia nervosa who have not been able to complete multiple voluntary inpatient admissions to those who have been able to and remain well in the year following. Methods: This study analyzed existing data from a specialist inpatient eating disorder program at a large Canadian hospital collected between 2000 and 2016. Data was available on 39 patients who had only incomplete admissions and 40 patients who had been able to complete their first admission and not relapse in the year following. These two groups were compared on a series of variables including age, weight, diagnoses, duration of illness, severity of eating disorder psychopathology and severity of depressive symptoms at admission to hospital. Results: Results indicated that patients with multiple incomplete admissions were more likely to have the binge purge subtype of the illness, had more severe eating disorder beliefs, had more depression symptoms at admission, had longer durations of illness and had a younger age of onset. Interestingly, there was no statistical difference between body mass index (BMI) and binging or purging frequency at admission. Patients who had multiple incomplete admissions appeared to be purging in the absence of binging and gained weight at a slower rate. Conclusions: Patients who are unable to complete

multiple inpatient admissions for anorexia nervosa appear to have more severe eating disorder cognitions and depressive symptoms at admission than those who can complete treatment and not relapse imminently. However, these patients do not present initially at lower weights. Nor do they have statistically different frequencies of other eating disorder behaviors such as binging and purging. These results suggest that while treatment resistance is related to duration of illness, severe anorexia nervosa and treatment resistant anorexia nervosa are separate concepts.

No. 73

Assessing a Pediatric Behavioral Health Emergency Service: Essential Clinical Skills and Current Telephone Triage Risk Assessments

Poster Presenter: Amrita Ramanathan, B.A.
Co-Authors: Kathleen R. Donise, M.D., Jennifer Jencks, Ph.D., Pamela Hoffman, M.D., Anthony Spirito, Ph.D.

SUMMARY:

Introduction: Suicide is the third and sixth leading cause of death for 15- to 24-year-olds and 5- to 14-year-olds respectively[1]. While sending a child to the ED may appear to resolve the crisis situation effectively, it causes a variety of significant negative impacts for the medical system, patient, and family.Lifespan's Pediatric Behavioral Health Emergency Service (PBHES) has a crisis telephone service, Kids'Link, to address children's safety by assessing crises and then connecting families with the appropriate level of services. The number of Kids'Link calls has surged by more than 85% since 2014. Mental health triage services rely on the presumption that clinicians know how to efficiently and effectively assess risk. Currently little is written about what is necessary to perform a brief but thorough telephone triage when the person calling is a guardian rather than the patient. Aims: (1)To understand the characteristics inherently necessary to perform competently as a pediatric emergency service clinician (ESC), (2) to assess how skilled ESCs currently assess safety and uphold responsibilities during telephone triage,(3) to investigate how the experience and capability of an ESC team can be enhanced. Methods: Qualitative interviews were conducted with ESCs on PBHES (N=16) to gather information about their understanding of necessary skills and knowledge base to perform telephone triage, and how experienced ESCs believe new clinicians can be better trained to handle crisis calls. ESCs were observed as they performed telephone triage with parent callers to determine how risk is currently assessed and to later use that information to enhance the development of a standardized triage tool. Results: Overall, ESCs reported high confidence in handling phone triage assessments. Essential skills for an ESC include comfort on the phone, gathering important information quickly and efficiently, identifying the ideal level of mental health care, being patient and non-judgmental, understanding the limits on the phone, navigating callers needs reasonably, ability to assess for safety, knowledge of resources, experience and multitasking. ESCs reported factors that could improve confidence among new clinicians include increased experience, having a supportive team, peer consultations, staff training with case studies, having a guideline or standard list of questions. Observations provided insight into current risk assessment strategies. Conclusion: Themes reported by ESCs and observations of those ESCs can provide guidance to make better triage tools. Further investigation is required to create a standardized tool that can help train ESCs and guide risk assessments completed by phone. Dynamic training along with a standardized telephone triage tool is necessary to ensure assessments are made accurately and empathically. Additional steps to determine how these current triage processes can contribute to the development of a standardized triage tool.

No. 74

Ethical and Policy Implications of Food Addiction: A Scoping Review

Poster Presenter: Stephanie Cassin, Ph.D.
Co-Authors: Karin Kantarovich, Aceel Hawa, Adrian Carter, Sanjeev Sockalingam, M.D., Daniel Buchman

SUMMARY:

Background: Obesity is Canada's fastest growing public health problem. The food addiction model has been proposed as one explanation for modest treatment outcomes and high relapse rates observed in obesity. The model suggests that some individuals

have an addiction that causes weight promoting eating behaviours such as binge eating and compulsive overeating when exposed to certain "addictive" foods. Although "food addiction" is not an official diagnosis in DSM-5, the food addiction label is widely used and has generated considerable controversy and debate among clinicians, researchers, patients, and the public. The current debate focuses primarily on whether certain food substances are actually addictive in a neurobiological sense. In comparison, relatively little research has examined the potential implications of the food addiction label. The purpose of the current review was to explore the possible ethical and policy implications of the food addiction label, both of which have potential implications for the diagnosis, treatment, and prevention of "food addiction". Methods: We conducted a scoping review on the ethical and policy implications of food addiction using the Arksey and O'Malley framework. Our synthesis was supported by with a CIHR-funded international retreat to further triangulate our findings. A search of three electronic databases (OVID Medline, PsycINFO, CINHAL) and their sub-databases identified a total of 147 articles from 1977 to 2016. Fifty-seven of these articles were deemed relevant to our scoping review. Article types included editorial commentaries, reviews, and empirical publications. The searches were limited to human studies and English language articles only. Article selection and extraction was performed by 4 independent reviewers. Results: Our analysis yielded four main themes: ethics, policy, stigma, and the role of evidence. These main themes included sub-themes that intersected with the ethics concepts of personal choice, willpower, free will, and empowerment. Policy themes suggested a need for policy makers to move away from causative frameworks when devising policies and focus towards public health models. The results also suggested a need for policy initiatives in education for the public. Conclusions: Our review results highlight the complex interplay of ethical, health policy and stigma related factors when considering the concept of food addiction within obesity. These identified issues should be used to inform future research on the role of the food addiction model and potential implications in obesity research. Future research is needed to further expand on the evidence for the food addiction model and to understand ethical and stigma related to the label of food addiction.

No. 75

Suicidal Behavior in the Setting of Severe Progressive Medical Illness: Differential Diagnosis and Ethical Considerations

Poster Presenter: Andreea Bucaloiu, M.D.
Co-Author: Andrei Toma Nemoianu, M.D.

SUMMARY:

How suicidal distress is conceptualized in the severely medically ill often determines the type and setting of interventions offered. Major depressive disorder, demoralization, and existential suffering are constructs found in the medical literature that can be used to frame the clinical approach to the severely medically ill patient. We discuss the case of an elderly man, with severe progressive medical problems and no past psychiatric history who was admitted to the hospitalist service after a potentially lethal intentional overdose. Psychiatry was asked to evaluate his suicidality and determine whether inpatient psychiatric hospitalization was warranted. The patient indicated that he wanted to die due to progression of physical debility, leading to a situation in which he could not live out his goals. He described an active and independent life in spite of neurological impairment but progressive physical impairment over the last years that interfered with his ability to engage in his beloved activities. He struggled to find meaning in his current existence, worried about being a burden due to progressive loss of function, and expressed concern over the prospect of losing his dignity. Open communication fostered a therapeutic alliance between the patient and the clinical team which facilitated shared decision making to maintain his autonomy. As a result, the team developed a palliative approach to his medical care that resolved his suicidality without requiring inpatient psychiatric admission. He was discharged home, with hospice and passed away peacefully several months later. Particularly after a suicide attempt, considerations of major depression may predominate. Failure to consider other diagnostic possibilities and means of intervening, however, may impinge on patient autonomy at the end of life, lead to a sense of invalidation, stigmatize

patient experience, and place the psychiatrist in an adversarial role with the patient's goals and wishes. In this poster, we discuss the key points of the constructs of major depression, demoralization, and existential suffering and suggest how they may be differentiated. We also discuss how constructs of demoralization and existential suffering impact ethical aspects encountered in the care of severely medically ill individuals.

No. 76

Do Staffing Patterns Allow Clinics to Implement a Full Range of Evidence-Based Practices in the Treatment of Schizophrenia?

Poster Presenter: Ali Maher Haidar, M.D.
Co-Authors: Michele Tortora Pato, M.D., Michael D. Garrett, M.D.

SUMMARY:

Introduction: Pharmacological algorithms have guided best practices in the treatment of schizophrenia for decades. More recently, evidence-based guidelines specify psycho-social treatments, including individual psychotherapy for psychosis (PfP). For example, the standard of care in Great Britain requires that all first-episode patients be offered cognitive behavioral therapy for psychosis (CBTp). The current US literature devotes little attention to the relationship between staffing patterns and evidence-based medicine. This question has received attention in other countries, particularly in Germany, where significant gaps have been identified between required patient/staff ratios and actual practice. Ongoing psychotherapy sessions (30-45 minutes) are a more time-intensive treatment than ongoing medication management (15-30 minutes per month), and accordingly would require more staff to implement. We set out to determine what patient/staff ratios would be necessary to implement an evidence-based program of individual psychotherapy for psychosis, and whether clinics are currently adequately staffed to offer this modality of treatment. Methods: We conducted a literature search to examine the existing literature that links staffing patterns to modalities of treatment, and we developed an Excel file that calculates the maximum number of patients that clinicians can carry on their clinic census given a varying mix of weekly psychotherapy appointments and shorter, less frequent contacts, plus activity like charting and administrative meetings not involving patient appointments (Excel file available on request). Results: We surveyed staff time demands in a busy inner-city public outpatient clinic and determined that a minimum of 4 hours/day was devoted to mandated activities other than patient appointments, which left 4 hours a day for patient visits. If all patients were to be seen in weekly individual psychotherapy, the census maximum would be 20, in keeping with the mandate in Great Britain. Providers in the clinic we sampled had caseloads 4-5 times larger than a census that would allow weekly psychotherapy. We found no evidence anywhere in the literature or in our clinic sample that administrators were using a workload calculator to tailor staffing patterns to support evidence-based psychotherapy treatment. Conclusion: Despite a current emphasis on evidence-based treatment, evidence-based psychotherapy for psychosis at present appears to be an unfunded mandate that has not been implemented in clinic practice, and that cannot be implemented until the caseloads of frontline clinicians see significant reductions.

No. 77

Identification of Risk Factors for Transgender Suicide: Secondary Analysis of the 2008 National Transgender Survey

Poster Presenter: Adrienne L. Grzenda, M.D., Ph.D., M.S.

SUMMARY:

Background: Suicidal ideation and suicide attempts occur at alarmingly high rates in the transgender populations. According to the 2008 U.S. Transgender Survey, 41% of respondents reported at least one suicide attempt, which stands in stark comparison to the 1.6% rate in the general population [1]. Here we perform secondary analysis of national survey data to identify significant risk factors for transgender suicide. Methods: In 2008, the National Center for Transgender Equality (NCTE) conducted a cross-sectional survey of transgender discrimination. Participation was voluntary and inclusion criteria were limited to English speakers, age 18 years and older, and identifying as transgender. Responses were fielded between September 2008 through March 2009 with the final convenience sample

consisting of 6,456 respondents from all 50 states. The original study was granted exempt status by the Institutional Review Board (IRB) of the Pennsylvania State University and the data is publicly available through the NCTE. The original survey included a broad definition of transgender. For the current study, only participants who indicated “male” or “female” as birth gender and identified as currently living now full-time as “female” or “male,” respectively, were included, resulting in 3049 participants for inclusion. Univariant (chi2) were performed on all variables. Logistic regression analyses were performed examining the influence of age, education, income, region, partnership status, medical transition, surgical transition, visual conformity, family loss, mental or physical disability, or harassment by medical professionals on suicide attempt status. All analyses were performed in STATA. Results: The sample was comprised of 63.2% male-to-female (MTF) and 36.8% female-to-male (FTM) identified participants. 46.7% of the sample reported ever attempting suicide. Possession of a college or graduate degree, surgical transition, and older age (45+) were associated with significantly decreased risk of reporting a suicide attempt. Residing in the Midwest or West (excluding California), family loss, mental or physical disability, or harassment by medical professionals resulted in significantly increased risk of suicide attempt. Partnership status, income, insurance status, visual conformity, and medical transition status did not significantly influence suicide risk. Conclusion: Here we demonstrate the importance of large scale analysis of this highly vulnerable population to better identify significant risk factors for attempting suicide. In the future, these data may result in improved screening tools in outpatient and emergent settings. Future directions will use advanced modeling techniques to better capture the complexity of the data and improve prediction. This study was supported by the APA/APAF Research Fellowship.

No. 78

Neuroimaging Gender Dysphoria: A Novel Psychobiological Model

Poster Presenter: Murat I. Altinay, M.D.

SUMMARY:

A. Introduction and Background The acronym LGBT, which stands for lesbian, gay, bisexual and transgender is commonly used to describe non-heterosexual, non cis-gender individuals as a whole. Transgender people experience incongruence between their biological (assigned) gender and experienced gender. When the incongruence between the experienced gender and the gender assigned at birth causes significant impairment in psychological, social and occupational functioning, the term gender dysphoria (GD) is used. The underlying pathophysiology of GD is not well understood and it is often confused with major depressive disorder (MDD). Evidence from neuroimaging and neuropsychiatric studies were explored to identify differences between GD and MDD, the pathophysiology of GD was explored to have a better understanding of this diagnosis and to novel model for GD was formulated. B. Methods A detailed PubMed search was conducted that aimed to review neuropsychiatric articles that focused on neurological, biological and neuroimaging aspects of gender development, transgender identity and gender dysphoria. The information obtained from the literature was then used to formulize a GD model. C. Results Evidence in current literature suggests that GD and major depressive disorder (MDD) are separate diagnoses and different mechanisms underlie in pathophysiology of these diagnoses. There are some distinct gray matter volumetric brain differences as well as brain activation and connectivity differences in individuals with transgender identity compared to cisgender males and females, which suggests that there is a neurobiological basis of transgender identity; which leads to the concept of brain gender. Individuals with GD encounter a recurrent conflict between their brain gender and the societal feedback of their gender. This recurrent conflict causes the transgender brain constantly to be constantly exposed to prediction error and cognitive dissonance, which finally leads to GD. The effects of constant cognitive dissonance and prediction error lead to functional connectivity and activation changes in the transgender brain. D. Conclusion The current knowledge indicates that GD is a complex condition, which has neurobiological basis, but it is closely affected by the individuals’ interaction with the external world, individual’s prediction of the

world and the feedback received from the world. We propose a novel GD model in which the development of GD includes cognitive dissonance (CD) and prediction error (PE) processes involving anterior cingulate cortex (ACC) as one of the key brain structures. This model can be used to generate testable hypotheses using behavioral and neuroimaging techniques to understand the neuropsychobiology of GD.

No. 79

Effects of Perceived Social Stigma on Mental Health of Heterosexual, Gay, and Transgender

Poster Presenter: Taehyung Kim

SUMMARY:

Background : The following research studies the effects of social stigmatism they have on mental health regarding heterosexuals and sexual minorities, in specific gays and transgenders. Methods : The subjects of this research are Koreans that reside in South Korea, and of those, snowball sampling has been conducted for each heterosexual, gay and transgender groups. Each group was comprised of 43 heterosexual, 40 gay, and 40 transgender people. Note that gays and transgenders in the research all have come out with their sexual orientation. In order to measure the social stigmatism based on sexual oreintations, the research has used stigma awareness measurements and Korean Symptom Check List 95 (KSCL95) to measure mental health. Analysis of each group was conducted with depression, anxiety, somatization, aggression, and suicide as the dependent variables, which are mental health related variables as indicated by KSCL95. These dependent variables were put through series of variance analysis. Then the level of social stigmatism was controlled as covariates in analysis of covariance, with repetition. Results: First, there was a meaningful difference in depression between the heterosexual group and transgender group. When the stigmatism awareness was controlled, the difference between the two groups disappeared. Second, there was a meaningful difference in anxiety between heterosexual group and transgender group. This was the same between gay group and transgender group. However, when the stigmatism awareness was controlled, only the difference between the heterosexual and transgender groups, and gay and transgender groups disappeared. This was not the case for heterosexual and gay groups where it showed no significant difference. Third, heterosexual group and gay group did not show significant difference in terms of somatization. Same goes for heterosexual group and transgender group. However, between gay and transgender groups, there appeared a meaningful difference. When the stigmatism awareness was controlled, the group's differences have maintained the same.Fourth, there was a meaningful difference between heterosexual group and transgender group in aggression. Conclusion: Finally, in terms of suicide, the comparison between heterosexual and gay groups, and heterosexual and transgender groups both showed meaningful differences. However, between gay groups and transgender groups, there was no significant difference. Once the stigmatism awareness was taken into control, the differences had disappeared. As seen in the results, the transgender group showed more vulnerability in relation to mental health than the gay group. It can be concluded that this is largely due to difference of stigmatism based on sexual orientations. Hence, the implications and limitations of this research are presented for further discussion and proposal.

No. 80

The Relationship of Perceived Discrimination and National and Religious Identities Among Muslim American Males

Poster Presenter: Rebecca Spencer

SUMMARY:

Research has shown that the amount of discrimination towards Muslims in the United States has increased substantially about the 911 attacks. There is also research support that perceived discrimination and discrimination affects many factors related to the well being of individuals. Perceived discrimination has also been shown to contribute to national and religious identities. This study examined the relationship among perceived discrimination, and national and religious identities among 104 Muslim male Americans. The Everyday Discrimination Scale, Religious Identity Development Scale, and Collective Self-esteem Scale were used to measure the variables studied. A survey for other descriptive information (e.g. age, kind of

discrimination experienced, education, coping strategies, area of residence) Positive correlations between perceived discrimination and national identity but no significant relationships were found. Recommendations for mental health professionals are offered.

No. 81

Crisis Center: Improving Communities' Well-Being Through Psychiatric Service Innovation

Poster Presenter: Christina Dearie Gerdes, M.D., M.A.
Co-Author: Rajvee P. Vora, M.D.

SUMMARY:

Background: In 2014, New York State's Medicaid Redesign Team (MRT) introduced their waiver amendment through the Delivery System Reform Incentive Payment (DSRIP) program. DSRIP's purpose is to restructure and improve the health care delivery system in NY State with the main goal of reducing avoidable hospital and emergency room (ER) use by 25% over five years. In keeping with this effort, Northwell Health developed an innovative behavioral health ambulatory crisis center for adults. In the Nassau – Queens's area in NY access to psychiatric services is limited. Individuals often wait 1 to 3 months for an intake appointment. The goal of the Crisis Center is to improve the local communities' behavioral health by increasing access to comprehensive psychiatric evaluation and treatment. Methods: Northwell Health's Zucker Hillside Hospital opened the Behavioral Health Crisis Center in May 2017. The center is open for walk-ins Monday through Friday from 9:00am to 7:00pm. The center is staffed with psychiatrists, licensed clinical social workers (LCSW), licensed mental health counselors (LMHC), certified peer advocates, medical assistance and security. The center provides comprehensive psychiatric evaluation, crisis intervention, initiation of medication if indicated, ability to admit for inpatient hospitalization, ability to refer to the ER if warranted, and assistance with referral to psychiatric care. Individuals "walk-in" to the Crisis Center, are triage by the LCSWs and given evidence-based rating scales. The LCSWs present their findings to a psychiatrist who completes their evaluation, initiates medications if indicated, and works collaboratively with the LCSW and LMHC to refer the patient to ongoing psychiatric care. The certified peer advocate meets with the patient to review their treatment plan and discuss recovery. Results: The Crisis Center saw a total of 555 patients between May through July 2017. The mean age was 40, 43% were male, and 57% were female. The main referral source to the center was "walk-ins" at 30% followed by a physician at 24% and the ER at 12%. The main disposition was to community based organizations at 43%, followed by Zucker Hillside Hospital ambulatory services at 16%. 40% of the patients seen at the center reported that they would have gone to the ER if the crisis center was not available. Another 37% reported that they would have gone without care (including running out of medications or having their symptoms progress) if the crisis center was not available. In July 2017, the behavioral health ER volume associated with the crisis center decreased by about 19%. Conclusion: The Behavioral Health Crisis Center improves the local communities' behavioral health through innovative psychiatric services by increasing access to comprehensive psychiatric evaluation and treatment while reducing avoidable ER visits.

No. 82

Collaborative Care Demonstration: Improving Behavioral Health Well-Being in Primary Care

Poster Presenter: Christina Dearie Gerdes, M.D., M.A.
Co-Authors: Rajvee P. Vora, M.D., Scott Benjamin Falkowitz, D.O., George Alvarado, Andrew Tucci, Kristoffer Calvert Strauss

SUMMARY:

Background: In 2015, SAMHSA's National Survey on Drug Use and Health estimated that 16.1 million adults in the U.S. had at least one major depressive episode in the past year. For multiple different reasons, including lack of access to psychiatric care, primary care settings have become the largest provider of mental health services in the U.S. Approximately 60 percent of patients being treated for depression in the U.S. receive treatment in primary care settings. To address these needs, many primary care providers are integrating behavioral health care services into their practices. Currently, the collaborative care model has the most robust research evidence for improving mental health care provided in the primary care setting and can significantly improve quality of care, health

outcomes, lower costs, and increase satisfaction for both patients and primary care providers. This project demonstration uses the collaborative care model in a primary care clinic to effectively treat mild to moderate depression and anxiety. Methods: Following the collaborative care model, a behavioral health care manager (BHCM) was integrated into a primary care clinic five days a week. The BHCM assists the primary care provider (PCP) with the identification and treatment of patients with behavioral health conditions. The BHCM provides a range of services including: patient education, short term evidence-based psychotherapy, monitoring of treatment response, and facilitating psychiatric consultation between the PCP and their supervising psychiatrist. The BHCM tracks each patient in a HIPAA protected registry and presents each patient to the consulting psychiatrist. The BHCM's patient registry was used to monitor clinical outcomes including the number of patients seen, office visits, ED diversions, outside behavioral health referrals, initiation of psychotropic medications and average change in PHQ9 scores. All the outcome measures reflect collaborative care provided from September 2016 to November 2016. Results: The BHCM saw a total of 132 patients with a total of 313 office visits. There were 24 ED diversions. The BHCM assisted with 89 outside behavioral health referrals. A total of 45 patients were started on a psychotropic medication by the PCP with consultation from the psychiatrist. The average PHQ9 decreased by 9 percent during this period. Conclusion: The successfully implementation of the collaborative care model in this primary care clinic was successful at enhancing the population's access to effective evidence-based behavioral health treatment and decreasing the number of avoidable ED visits. In addition, a significant amount of these patients were started on a psychotropic medication within the primary care setting under the guidance of a consulting psychiatrist.

No. 83

Mapping Evidence of Patients' Experiences in Integrated Care Settings: A Scoping Review

Poster Presenter: Alaa Youssef
Co-Authors: Maria Mylopoulos, Zarah Chaudhary, Rosa Constantino, Sanjeev Sockalingam, M.D., David Wiljer

SUMMARY:
Background: Integrated care models are evidence-based care delivery health systems that emerged as an approach to bridge gaps in care for targeted populations by leveraging the efforts of care coordination, measurement guided, evidence-based, and population-focused approaches. Although robust studies have established the clinical and cost-effectiveness of Integrated care models, little is known about whether these models facilitate a patient-centered care experience from the patient's perspective. Surfacing gaps in our knowledge, related to care key domains of patient experience such as patient safety, equitability, patient-centeredness, and accessibility or timeliness of care, is central to guide successful implementation of Integrated care models. **Objective:** This scoping review aims to comprehensively review the literature to examine the experiences of the targeted patient population in integrated care settings to synthesis and illuminate current gaps in our knowledge that is critical for translating evidence-based research on these care models into practice. **Methods:** A scoping review was conducted in the following databases: MEDLINE, EMBASE, PSYC INFO, CINAHL, AMED, the Cochrane Library, and grey literature. Our search results yielded 2611 unique resources of which 24 qualitative studies, one thesis dissertation, and one summary report met our eligibility criteria for analysis. **Results:** Analyses of the existing evidence revealed variability in implementation efforts and a lack of clearly examined structural facilitators and barriers to integrated care implementation. Structural integrity when implementing these care models may be critical as it has the power to transform patient experience through three ways: a) alleviating or failing to reduce stigma experienced by patients while accessing to care b) fostering the development of patient-care team alliance to meet population needs c) personalizing care to address individuals' unique needs. **Conclusion:** Effective patient engagement and experience of patient-centeredness are shaped by interactions with care-team and structural elements in the care model. Thus, successful implementation and sustainability efforts demand thoughtfully balancing between structural standardization and adaptability of the model to

address specific contextual factors related to the targeted population needs.

No. 84

An Ethnographic Study of Care for Co-Occurring Mental and Physical Conditions

Poster Presenter: Andrew Lee
Co-Authors: Steve Durant, Alaa Youssef, Sanjeev Sockalingam, M.D., Zarah Chaudhary, Maria Mylopoulos

SUMMARY:
Introduction: Patients with co-occurring mental and physical conditions are known to have worse health outcomes and require more complex care coordination. The integrated care model (ICM) aims to address the challenges of treating patients with both mental and physical illness through enhancing patient experience, improving health outcomes, and reducing costs. Several organizations including the APA have focused on training healthcare providers to increase capacity in IC. The implementation of ICM varies in different settings and clinical settings may lie on the continuum of integration; thus medical training must address the needs within these contexts and structures. Through this ethnographic study of integrated care, we sought to identify the commonalities and contextual differences in care coordination at various clinical settings. Methods: Using a collective case study methodology, we examined four different sites encompassing: consult-liaison services at a major academic hospital, an interdisciplinary specialty clinic, a treatment program in a community clinic, and a telemedicine service which provides an assessment for complex patients in the community. Our data collection involved observations of individuals in various clinical roles and key informant interviews. Observations involved shadowing healthcare practitioners in their everyday interactions caring for complex patients and attendance of clinical rounds. Individuals involved in patient care from the respective sites were interviewed about their experiences with care coordination and working in integrated care settings. Field notes and interview transcripts were thematically analyzed through an iterative process. Results: Implementation of integration varied significantly between sites, which was observed through the processes used to address the unique needs of their patient population and clinical settings. Five elements of integration were identified: eligibility and access, patient self-management, engagement of patients and providers in program design and planning, role definitions and handoffs within the clinic, and coordination of supports beyond the clinic. Two cross cutting themes were identified as integral to care coordination: standardization and adaptation, and stigma and advocacy. These themes were central to how the five elements of integration were implemented in the respective clinical settings. Conclusion: As we move towards ICM as a means of health systems improvement, it is important to consider the contextual variation and complexity associated with implementing ICM in different care settings. Our study demonstrates that adaptability and non-medical expert skills are essential to addressing variation and complexity in integrated care.

No. 85

Identifying Personality Variables Among Hawai'i's Homeless Veteran Population

Poster Presenter: Anthony Arellano

SUMMARY:
The state of Hawai'i has been experiencing a steady rise of veteran homelessness, which is a smaller, yet significant subset of the entire homeless population. Environmental, economical, occupational, and housing factors are the primary external variables most attributed to homelessness, while internal factors such as the individual's personality are examined to a far lesser degree. This study examined a wide array of personality variables in an effort to determine which, if any correlate to the veteran homeless phenomenon using the Personality Assessment Inventory (PAI). Results identified statistical differences in the combat homeless veteran over the non-combat homeless veteran in the Borderline Features, Anxiety, and Paranoia clinical scales, and the Suicide Potential Index. An Independent-Samples t-test was conducted to compare the Borderline Features Scale scores for combat and non-combat homeless veterans. There were n = 38 combat homeless veterans and n = 65 non-combat homeless veterans. There was a significant difference in the scores for combat

homeless veterans (M = 64.00, SD = 13.32) and non-combat homeless veterans (M = 57.89, SD = 11.68; t (101) = 2.43, p = .017, two-tailed). The magnitude of the differences in the means (mean difference = 6.11, 95% CI: 1.12 – 11.09) was moderate (eta squared = .06). An Independent-Samples t-test was conducted to compare the Anxiety Scale scores for combat and non-combat homeless veterans. There were n = 38 combat homeless veterans and n = 65 non-combat homeless veterans. There was a significant difference in the scores for combat homeless veterans (M = 61.24, SD = 14.23) and non-combat homeless veterans (M = 54.46, SD = 12.77; t (101) = 2.49, p = .014, two-tailed). The magnitude of the differences in the means (mean difference = 6.77, 95% CI: 1.38 – 12.17) was moderate (eta squared = .06). Moreover, strong positive correlations were discovered in the following: A Pearson's product-moment was used to assess the relationship between the Suicide Potential Index and Borderline Features PAI Scale in N = 103 homeless veterans. There was a strong positive correlation between the Suicide Potential Index and Borderline Features t-scores, r = .876, n = 103, p < .0005. A Pearson's product-moment was run to assess the relationship between the Suicide Potential Index and Anxiety PAI Scale in N = 103 homeless veterans. There was a strong positive correlation between the Suicide Potential Index and Anxiety t-scores, r = .821, n = 103, p < .0005. A Pearson's product-moment was run to assess the relationship between the Borderline Features and Anxiety PAI Scales in N = 103 homeless veterans. There was a strong positive correlation between Borderline Features and Anxiety t-scores, r = .774, n = 103, p < .0005. Given the findings of this study, adequate diagnosis and treatment from psychiatry for the anxiety and borderline symptoms may further reduce the suicide potential of Veterans.

No. 86

Pharmacokinetic Properties of Esketamine and Ketamine Racemate After Dry Powder Inhalation, Intravenous, and Intratracheal Administration in Rats

Poster Presenter: Mikolaj Matloka
Co-Author: Sylwia Janowska

SUMMARY:

Background: Ketamine has been known and used as anesthetic for over 50 years. Recently, it is getting more and more attention as a very rapid acting antidepressant and being considered as a promising treatment option for patients suffering from treatment-resistant depression. However, the ketamine undergoes a strong first-pass metabolism effect, excluding the oral administration from drug development process. Infusion of the ketamine as a therapeutic option requires an outpatient support. In order to develop a reliable and comfortable ketamine delivery method, we explored the pharmacokinetic characteristics in rats of one of ketamine's enantiomer – esketamine and ketamine racemate after dry powder inhalation, intravenous and intratracheal administration. Methods: Esketamine hydrochloride at the target level of 10 mg/kg or ketamine hydrochloride racemate at the target level of 20 mg/kg were administered to male Wistar rats. Administration procedures included acute intravenous (I.V.) or intratracheal (I.T.) (only esketamine) routes or 30-min long dry powder inhalation (INH.). Blood samples were collected 5, 10, 30, 60, 120 and 240 min after I.V. and I.T. administration and 6, 12, 24 and 30 min after the start of inhalation and 5, 15, 20, 30, 60, 120, 150 and 240 min after the end of administration (at least n=3/timepoint). Brain samples were collected 10 or 15, 30, 60, 120 and 240 minutes after the end of all administrations. Enantioselective and racemic ketamine concentration analysis together with its major metabolites (norketamine and hydroxynorketamine) was evaluated by LC/MS/MS method. Results: Following ketamine administration, ketamine and its metabolites were detected in the blood and brain samples (achieving 2-3 higher concentrations than in plasma). 30 minutes dry powder inhalation enabled to successful deliver a dose of 7.8 mg/kg for esketamine and 19.9 mg/kg for ketamine racemate. Intravenous and intratracheal administration provided a comparable pharmacokinetic profile with very high, 95%, bioavailability for IT route. Dry powder inhalation administration provided successful systemic and brain tissue exposure with the 85% bioavailability for both esketamine and racemate dosing. Conclusion: Dry powder inhalation proved to be a very potent delivery method for ketamine with high bioavailability – contrary to available data for oral

administration, after which ketamine undergoes extensive first-pass metabolism. Therefore, the inhalation route of administration could provide a novel solution for ketamine delivery and offer additional advantages including efficient and precise dosing and comfortable, preferable administration over intravenous route. This study was supported by Celon Pharma S.A. and National Centre of Research and Development.

No. 87

PZ-KKN-94: A Novel and Potent Antagonist of 5-HT6 Receptor With Procognitive and Antidepressant Activity in Animal Models

Poster Presenter: Mikolaj Matloka

SUMMARY:

Background: Serotonin 5-HT6 receptors (5-HT6Rs)belong to the G-protein coupled receptors superfamily and are almost exclusively localized in the central nervous system. It has been demonstrated that 5-HT6Rs are engaged in the formation of neuronal circuits. Moreover, a number of preclinical and clinical studies indicate the therapeutic potential of 5-HT6R modulators in the treatment of cognitive disorders associated with Alzheimer's disease and behavioural and psychological symptoms of dementia. In the present study, we assessed activity and drug-like properties of a novel 5-HT6 antagonist – PZ-KKN-94. Methods: In vitro activity was assessed by radioligand binding study and functional characteristic was determined by using HEK293 cells overexpressing 5-HT6R. Selectivity profile was explored by use of SafetyScreen 44 (DiscovereX) at a concentration of 10 uM. Microsomal stability was performed on rat microsomes. Pharmacokinetic properties were assessed in male Wistar rats after oral administration at a dose of 10 mg/kg. All behavioral studies were performed on male rats after oral administration. Procognitive effects were explored in Novel Object Recognition tests (NORT) in impaired conditions (scopolamine/phencyclidine) and in Attentional Set Shifting test (ASST). Additionally, the cognitive effects in NOR were studied after 14 day (BID) administration and in aged, 20 months old rats. Antidepressant effect of the compound was determined in Force Swimming Test (FST). Results: In vitro experiments revealed very high activity of PZ-KKN-94 with binding affinity K(i) = 2.2 nM and antagonistic activity K(b) = 1 nM in cell cultures. PZ-KKN-94 presented additional antagonistic action to non-specific targets (IC50 > 1.5 uM) with an exemption of 5-HT1B receptor, for which EC50 in agonistic mode was determined at a level of 30 nM. Moreover, the compound is characterized by satisfactory metabolic stability (25 ul/min/mg). Pharmacokinetic studies in rats demonstrated good oral bioavailability with c(max) of 116 ng/ml and BBB=~3 at c(max). Behavioral studies showed ability of the compound to reverse the cognitive impairment caused by scopolamine or phencyclidine at doses of 0.3 or 0.1 mg/kg respectively. Furthermore, PZ-KKN-94 acted procognitive in aged animals at dose 0.3 mg/kg and no tolerance was developed after 14 day BID administration. PZ-KKN-94 was able to improve attention of the animals at a dose of 1 mg/kg in ASST. The compound also showed antidepressant action at a dose of 0.1 mg/kg in FST. Conclusion: 5-HT6 receptor modulators provide a novel mechanism of action for treatment of CNS disorders. Our study characterized the novel 5-HT6 receptor antagonist PZ-KKN-94. Evaluation of its properties revealed its high activity potential in in vitro and in vivo studies with procognitive and antidepressant mode of action. Moreover, its preferential drug-likeness profile justifies further development of PZ-KKN-94 as a potential therapy in CNS disorders.

No. 88

Behavioral Effects of Dasotraline Versus Methylphenidate in an ADHD-Animal Model: Implications for Treatment of ADHD

Poster Presenter: Lenard Adler
Co-Author: Scott Kollins

SUMMARY:

Background: Current ADHD pharmacotherapies have either limited efficacy or are associated with undesirable adverse events. Accordingly, there is an urgent need to develop novel pharmacotherapies with superior efficacy and tolerability profiles over current therapies for improved treatment of ADHD and related disorders. Methods: We examined the effects of 3 doses of dasotraline (0.3, 1 and 3 mg/kg) vs 3 doses of methylphenidate (MPH; 0.3, 1 and 3 mg/kg) on locomotor activity in juvenile animals

lesioned with 6-hyroxydopamine (6-OHDA) as neonates, an ADHD animal model, in comparison with sham-lesioned control age littermates. Developing animals (PD 25-28) were placed in locomotor cage 60 min after oral administration of vehicle or individual doses of tested drugs. Motor activity was monitored individually for 90 min in a microcomputer controlled infrared photobeam activity monitoring system. Results: Lower doses of dasotraline (0.3 and 1 mg/kg) induced mild stimulation in locomotor activity (2.3- and 3-fold increase, respectively) in sham-lesioned juvenile animals. In contrast, the three doses of MPH (0.3, 1 and 3 mg/kg

No. 89

Neuroleptic Monotherapy in Treating Psychosis in 22q11.2 Deletion Syndrome

Poster Presenter: Monish Parmar, M.D.
Co-Authors: Julia Luu Hoang, M.D., Takesha J. Cooper, M.D., M.S.

SUMMARY:

Objective: Schizophrenia occurs by early adulthood in approximately 30 percent of patients with 22q11.2 Deletion Syndrome (DS)(1). We present a successful response via intervention with antipsychotic monotherapy to treat suicidality, hallucinations, and behavioral disturbances. Goal of treatment was to intervene early to prevent worsening long-term clinical outcomes (2). Case 1: 14 yo Caucasian Female with a confirmed diagnosis of 22q11.2DS, along with comorbid Hypothyroidism, Intellectual Disability, and Psychosis. She was visualizing a “bleeding ghost every day” and experiencing command auditory hallucinations telling her to kill herself via stabbing or choking. She was hospitalized for a suicide attempt after drinking weed killer and was treated with Sertraline for several weeks with no improvement. She was hospitalized once more after attempting to choke herself and was treated with Aripiprazole with a partial response. However, after a few months, her hallucinations worsened. Pharmacogenomic testing was performed and she was switched to Lurasidone. She was titrated up to 80 mg, which led to a significant reduction in the quality and quantity of her hallucinations, improvement in mood, and diminishment of suicidal thinking. Case 2: 33 yo Hispanic Female with a confirmed diagnosis of 22q11.2DS, along with comorbid Intellectual Disability and Psychosis. Although she is able to use simple words, expressions, and can interact meaningfully (smiles and handshake), she is unable to live independently and requires assistance with some ADLs. She started seeking mental health services at age 25 due to hallucinations. She had been relatively stable for years on 20 mg of oral Aripiprazole but was switched to long acting injectable Aripiprazole because of increasing concerns about adherence. She was initially treated with Long Acting Aripiprazole 400 mg every month but continued to have residual aggressive behaviors and hallucinations. Once her dosing scheduled was titrated up to every 3 weeks, her residual symptoms diminished and she stabilized. The likelihood of her remaining out of the hospital was high as she stopped complaining of hallucinations and thoughts of self harm.

No. 90

The Daily Rhythm of Human Physiological Sleepiness in Response to 40 H Continuous Wakefulness Remains Unchanged Following Brain Insult

Poster Presenter: Allison Brager

SUMMARY:

Daytime sleepiness and nighttime sleep disturbance are commonly reported in mild traumatic brain injury (mTBI) patients. This suggests a difference in the accumulation and dissipation of sleep pressure between concussed and non-concussed patients. It is unknown whether or not these symptoms persist beyond 3 months post-injury. We sought to measure the difference in sleep pattern between participants 3 -12 months post-injury versus controls, expecting injured volunteers to exhibit increased sensitivity to acute, total sleep deprivation (40 h; n=13; 6 concussed; 25 yo). At-home actigraphic sleep (2 wk) was ~ 8 h at baseline. After laboratory acclimation, the volunteers underwent 40 h of forced wakefulness followed by an 8 h sleep opportunity (recovery). A 20-minute Maintenance of Wakefulness Test (MWT) was used to objectively assess physiological sleepiness by measure of sleep latency. The test was performed every 4 hours for the duration of forced wakefulness and the recovery

period, amounting to 12 scored MWTs. Rates of accumulated sleepiness across the 40 h of forced wakefulness were similar for concussed subjects and age-matched controls (p=0.161). Rates of dissipated sleepiness across

No. 91

Emotionally Dictated Visual Hallucinosis in Temporal Lobe Epilepsy

Poster Presenter: Jasir Nayati
Co-Authors: Angela Rekhi, Khurram Janjua, Chukwuemeka Oriala, Alan Hirsch, Blaise Wolfrum

SUMMARY:
Background: Hallucinations are a frequent component of temporal lobe epilepsy (TLE). The factors which mediate the affective component of TLE hallucinations has not heretofore been described. A patient with TLE presenting with emotions preceding and congruent with the content of sensory hallucinations is presented. Methods: Case Study: A 27 year old male presented with a history of visual and auditory hallucinations since the age of five. These hallucinations can last from seconds to hours, and occur up to 100 times a day. The visual hallucinations can be of living things or objects, which appear as a single entity or in groups of up to 50. They are either familiar or strangers, appearing alive, dead, or headless, and differ in age, complexion, sex, and size. Emotions impact the content of the visual hallucinations. When in fear, the hallucinations will start decomposing or self-harm itself. During a sad state, the hallucinations would stare at him, but during anger, they begin to act negatively with nastiness, vileness, and in an un-empathic nature. He does admit to frequent déjà vu, but denies jamais vu and drug use. Results: Abnormalities in neurological examination: Cranial Nerve (CN) Examination: CN III, IV, VI: bilateral ptosis. Motor Examination: Drift Testing: Right upward-outward drift, right cerebellar spooning, and Abductor Digiti Minimi sign. Reflexes: 1+ throughout. Hoffman Reflex: positive bilaterally. Neuropsychiatric Testing: Go-No-Go Test and Animal Fluency Testing: Normal. Magnetic Resonance Imaging of brain with/without infusion: Normal. Five day electroencephalogram: Temporal Lobe Status Epilepticus with bilateral foci. Phenytoin was prescribed, and once therapeutic level were achieved, all of his hallucinations and unprovoked emotional responses, whether independent or concurrent, resolved. Conclusion: Since anxiety has been found to trigger hallucinations [Allen 2005], an epileptic event may manifest initially with emotion, and then spread into the visual hallucinatory phase [Bear 1977]. Emotions may act as a primer for hallucinatory seizures, since strong emotions decrease seizure threshold [Nakken 2005]. The emotion/visual hallucination concurrence may be related to the emotion as a baseline environmental context, which the hallucination is projecting onto. The emotion may be an epileptic seizure for which he has an emotional response to, inducing hallucinations. Reacting to an intrusive emotion may cause him to create a hallucination, which serves to egosyntonically justify a strong unprovoked emotional state. One can also say the hallucinations precede the emotion, and an emotional response is enacted in the hallucination. Since time-frame can be distorted during a seizure, differentiating whether an emotion preceded the hallucination, or vice versa, becomes difficult. Given this case, those suffering from hallucinations and strong emotional states warrant TLE evaluation.

No. 92

Rage Against Humidity: The Exacerbation of Burning Mouth Syndrome

Poster Presenter: Jasir Nayati
Lead Author: Angela Rekhi
Co-Author: Alan Hirsch

SUMMARY:
Background: A variety of neurological conditions have been reported to be exacerbated by meteorological effects including migraine headaches, multiple sclerosis, and phantogeusia. The association between atmospheric humidity and Burning Mouth Syndrome (BMS) pain has not heretofore been described. Methods: Case Report: A 47-year-old female presented with a four year history of BMS pain. She describes her pain to be a constant burning sensation, predominantly involving the dorsum of her tongue, radiating to the lips, gums, and palate. She noted the pain to be directly correlated with humidity, fluctuating from a baseline of 3/10. For instance, when humidity is 95% or higher, her pain increases to 8/10 in severity.

However, when humidity is 45% or less, her pain decreases or subsides. She also found her pain to be exacerbated with sleep deprivation, stressors, hot or spicy foods, water intake, and strong odors. Her pain was alleviated with rest, crying, marijuana, and medications including clonazepam, alpha lipoic acid, diazepam, alprazolam, buspirone and magnesium hydroxide. She also reported her osteoarthritic cervical pain to be directly correlated with the humidity shifts. Results: Abnormalities on Physical Examination: General: 1+ bilateral pedal edema. Neurologic Examination: Cranial Nerve Examination: CN II: anisocoria OD 4 mm OS 2 mm. Motor Examination: drift: Mild left pronator drift with a positive abductor digiti minimi sign bilaterally. Reflexes: 3+ throughout. Positive Hoffman bilaterally. Chemosensory testing: Olfaction: Brief Smell Identification: 11/12 (normal). Alcohol Sniff Test: 6 cm (anosmia). Pocket Smell Test: 3/3 (normal). Gustatory Testing: Propylthiouracil Disc Testing: 9/9 (normal). Fungiform Papillae Facial Nerve Function: Right: 32, Left: 34. Taste Quadrant Testing: Right to Left difference with a decrease in the left posterior tongue to all modalities. Conclusion: Pain fluctuations correlating with BMS may be weather dependent. For instance, an increase in humidity can enhance olfactory ability with subsequent odors [Kuehn 2007], which in turn can exacerbate BMS pain. Humidity and temperature shifts may alter blood flow in the oral mucosa, which in turn, can result in BMS pain. It has been seen that changes in oral blood flow cause higher vasoreactivity in BMS patients, and thus has been postulated to associated with BMS symptoms [Heckmann 2001]. Alternatively, other possible mechanisms include expectation effect, selective attention, recall bias, or a misreporting due to psychological needs for acceptance by examiner, similar to the Hawthorne effect (observer effect) [Adair 1984]. Further investigation into BMS pain relating to meteorological effects is warranted.

No. 93

Psychosis Among Children and Adolescents Within the California Encephaliitis Project: Infectious and Non-Infectious Etiologies

Poster Presenter: Mary Gable

SUMMARY:

Background: Psychiatrists working in inpatient settings or on consult-liaison services are often faced with sub-acute or acute onset psychosis, the etiology of which is not always clear. Interestingly, young subjects in the California Encephalitis Project (CEP) frequently tended to present with prominent or isolated psychotic symptoms prior to disease progression. This study attempts to examine cases from the CEP in order to better ascertain what the ultimate causes of such presentations were found to be, thus allowing for the development of a more complete differential and ultimately, more rapid and accurate diagnosis. Methods: The CEP was initiated in order to better assess infectious causes of encephalitis. Treating physicians referred specimens for testing to the CEP. Cases described herein presented to the CEP between 2007 and 2012. Patients must have been immunocompetent, at least 6 months of age, and must have met the case definition of “encephalitis,” which required that patients were hospitalized with encephalopathy accompanied by at least one of the following: fever, seizure, focal neurologic. or neuroimaging findings consistent with encephalitis. Specimens were accompanied by a standardized case history forms. CSF, respiratory specimens and serum specimens of both acute and convalescent phase were tested for 16 potential infectious agents as well as for autoimmune etiologies such as anti-NMDAR. Results: The median age of pediatric subjects, which numbered 314, was 11 years. 48% were female, while 52% were male. Hispanics accounted for 40% of such patients, and Caucasians accounted for 26%. African-Americans made up 12% of cases while Asians/Pacific Islanders accounted for about 10% of cases. Almost 90% of cases had prominent hallucinations, and of those about one-third appeared psychotic. Ultimately, the majority of cases progressed to demonstrating more than solely psychiatric findings such as movement disorders, seizures, aphasia, and autonomic dysregulation. However, etiologies were highly variable, with anti-N-methyl D-aspartate receptor encephalitis (anti-NMDAR) being the most common etiology in this age group, accounting for over 7.5% of cases. Enterovirus was less than half of that, and Ebstein-Barr virus (EBV) was notable for making about 2 % of cases. Overall, infectious causes were causal in about 9% of cases, while a surprising 11.5% were of a non-

infectious etiology, with over two-thirds of those being caused by anti-NMDAR antibodies. In 44% of cases, there was no identified etiology. Conclusions: Encephalitis, while not common in children, can have a high morbidity and mortality rate, especially when there are delays in appropriate treatment. Given that psychiatrists may be the first to see or to be consulted on such potential cases, it is helpful to understand what the potential etiologies may be so that they can be considered early in the differential.

No. 94

A Case of Psychosis Associated With Both Multiple Sclerosis and Borreliosis

Poster Presenter: Keith Edward Gallagher, M.D.
Co-Authors: E. Jane Richardson, M.D., Christopher Reid

SUMMARY:
Chronic autoimmune or infectious conditions such as multiple sclerosis (MS) and neuroborreliosis may mimic the symptomatology and natural history of schizophrenia, producing an insidious onset of positive and negative symptoms of psychosis, sometimes without gross neurologic deficits. MS is well-known to be associated with schizophrenia-like illness which can predate, postdate, or occur at the same time as the neurologic diagnosis. We present a case report of a 26-year-old male who presented with onset of psychosis in the second decade of life without concomitant neurologic impairment. The patient was diagnosed with schizophrenia, but upon readmission was found to have white matter lesions disseminated in time and space and optic neuritis consistent with MS. However, the patient also had positive serum Borrelia IgM titers, prompting consideration of neuroborreliosis as the etiology. We discuss the diagnostic and treatment considerations in cases of "organic" psychoses, and specifically the complex treatment considerations which arose in this case of two disparate but plausible etiologies.

No. 95

Olfactory Tasks and Affective and Non Affective Disorders

Poster Presenter: Arushi Kapoor, M.D., M.Sc.
Co-Author: Aitzaz Munir, M.B.B.S.

SUMMARY:
Objective: Impairments in olfaction have been documented in schizophrenia populations. However, it remains unclear how patients with schizophrenia (SZ) differ from patients with affective disorders in several olfactory tasks. Methods: Odor discrimination, threshold and memory and identification tasks were performed in 22 controls, 44 bipolar and 30 schizophrenia patients using flow-dilution olfactometer and the 40-item University of Pennsylvania Smell Identification Test (UPSIT). In the olfactometry, n-butanol was used for odor threshold task. Sociodemographic, cognitive and psychopathological measures of were also ascertained from all participants. Results: Significant differences between groups were observed only for odor identification and odor threshold tasks. The mean (± SD) UPSIT scores for odor identification, comparing SZ to healthy controls (HC) were 33.5 (5.8) vs. 28.3 (6.0), respectively ($P < 0.001$). Corresponding scores for SZ vs. HC on odor threshold tasks were 6.4 (1.5) vs. 3.9 (2.8), respectively ($P < 0.001$). These differences in odor identification and threshold remained significant ($P < 0.01$) after adjusting for age, sex and educational attainment in linear regression analyses. No differences were observed comparing bipolar patients to healthy controls in any of these tasks. Conclusion: This study confirms research evidence of impaired odor perception and high order processing in SZ, and demonstrates that these differences were not generalized to bipolar affective disorder. Future studies should aim to uncover the pathophysiologic mechanisms of these findings.

No. 96

Characteristics of Functional Neurological Symptom Disorder in Children

Poster Presenter: Ayol Samuels, M.D.
Co-Author: Tali Tuvia

SUMMARY:
Compared to the substantial literature for adults, there is limited data on Functional Neurological Symptom Disorder (FNSD) in the pediatric population. Most literature that is available is limited to case reviews. Additionally, data collected is limited to outpatient and ER settings. We will present data from a review of thirty children and adolescents diagnosed with FNSD in a pediatric

hospital over the course of a year. Our study looks at various epidemiological, medical, psychological, and phenomenological factors, including demographics, psychiatric comorbidities, presence of other somatic symptoms, nature of neurologic symptoms, presence and nature of stressors, level of impairment, and outcomes. FNSD in the pediatric hospital setting, to our knowledge, has not yet been studied and is important because it likely includes children with more severe symptomatology. Additionally, no previous studies we are aware of have looked specifically at a low socioeconomic status population in an urban setting, where resources are generally limited. Creating a better profile of these patients can help with prevention and targeted treatment.

No. 97

A Meta-Analysis of the Effectiveness and Efficiency of D-Cycloserine-Augmented Exposure Therapy With Treatment-Resistant Pediatric OCD Patients

Poster Presenter: Paul Sullivan
Co-Authors: Robert Friedberg, Ph.D., Wendy Packman

SUMMARY:
Obsessive-Compulsive Disorder (OCD) is a prominent public health issue among pediatric populations. Pediatric OCD is highly prevalent, affecting between 1% and 4% of all children and adolescents (Krebs & Heyman, 2010). Practice parameters recommend the implementation of Cognitive Behavioral Therapy (CBT) as well as Selective Serotonin Reuptake Inhibitors (SSRIs) to intervene with this population. However, not all pediatric patients respond to these empirically supported treatments. If patients do not respond adequately to pharmacological interventions and CBT they are classified as "treatment resistant." Currently, a standard of care does not exist for these youth. These patients are in urgent need of newer strategies to alleviate symptoms. D-Cycloserine (DCS), a partial glutamate agonist, shows promise as an adjunctive intervention with CBT. This meta-analysis explored whether DCS-augmented ERP is an effective and efficient form of intervention for OCD youth by consolidating the current literature into a meta-analysis. Utilizing a random effects model, effect sizes were calculated using Cohen's d and Hedges' g. Scores on the Child Yale-Brown Obsessive-Compulsive Scale (CY-BOCS; Scahill et al., 1997) served as the primary outcome measure for all analyses. Of 1,945 potential abstracts examined for initial review, five studies met inclusion criteria and were analyzed (Farrell et al., 2013; Mataix-Cols et al., 2014; Rynn, 2014; Storch et al., 2010b; Storch et al., 2016). The pooled population consisted of a total of 230 youth; of these participants 116 received DCS-augmented exposures compared to 109 who received placebo and five who received ERP alone. A random effects meta-analysis found an overall positive, very small, statistically non-significant effect size for DCS-augmented therapy relative to placebo-augmented exposures from pre-to post-treatment on total CY-BOCS scores (Cohen's d= 0.12, 95% CI= [-0.14, 0.38], z-value= 0.91, p-value= 0.36; Hedges' g= 0.12, 95% CI= [-0.14, 0.37], z-value= 0.91, p-value= 0.36). This result indicates a small, positive effect approaching statistical significance on symptom reduction at post-treatment for those receiving DCS. A second random effects meta-analysis found an overall positive, statistically non-significant effect size for DCS relative to placebo from pre- to mid-treatment total CY-BOCS scores (Cohen's d= 0.02, 95% CI= [-0.25, 0.29], z-value= 0.12, p-value= 0.90; Hedges' g= 0.02, 95% CI= [-0.25, 0.28], z-value= 0.11, p-value= 0.91). Thus, DCS was minimally efficient compared to placebo at reducing symptoms at mid-treatment.

No. 98

Ten-Year Experience of Clown Therapy as Well-Being Practice at a Medical Faculty in Brazil

Poster Presenter: André Furtado de Ayalla Rodrigues, M.D.
Co-Authors: Rafael Nascimento Barreiros, Lourdes Thalita Meyer de Andrade Cavalcanti, M.D.

SUMMARY:
The clown has been part of human culture, playing various roles - from a participant in sacred rituals to a royal counselor. Currently, the clown is seen as a transgressor and capable of satirizing human frailties. In 1986, happens the first related experience of a clown inside a hospital when it was realized a presentation for kids at the Columbia Presbyterian Babies Hospital. After this successful endeavor, the hospital created the "Clown Care Unit". In Brazil, the first group was created in 1991,

when the “Doutores da Alegria” (Doctors of Joy) with the intent to give back the kids control over their bodies, something that is totally taken from then when they are hospitalized. Based on this assumption, in 2007, a group of medical students from Faculdade de Ciências Médicas da Universidade de Pernambuco (Medical Sciences Faculty from Pernambuco University) started an extension program based on the clown’s artistic language. Throughout the 10-year existence of the group, more than 250 medical students have participated in this initiative that is coordinated by a Scenic Artist that teaches all the participants clown techniques before any action on the field and, quarterly there is a clown-technique training based on the deficiencies observed during the interventions. One of the outcomes during this period noted mainly through reports - “diários de bordo” (logbooks) - made by the participants, are the satisfaction and the wellbeing after each intervention and how they present themselves as relief activities. This led to a critical thinking in which the program started to pay equal attention and focus on its participants when compared to the patients. Now, some activities, like psychological support groups and theater groups, are focused solely on the medical students since being a medical student represents a higher risk of mental illness and suicide rates. Currently, the group is composed of medical students and medical doctors, also a faculty professor and a scenic artist as members with the function of coordinating the group’s activities. Therefore, this ten-year experience has shown that the clown therapy can be a wellness practice, not only for those who receive, the patients, companions and hospital workers but also those who practice.

No. 99

Burnout in Mental Health Professionals Working With Acute and Non-Acute Inpatients

Poster Presenter: Rikke Jørgensen
Co-Author: Gry Kjærsdam Telléus

SUMMARY:
Background: Burnout in mental health professionals is documented widely in the literature as a significant problem in the fields of psychiatric and mental health. Burnout in mental health professionals is associated with variables as job satisfaction, unsupportive management, ongoing education, inadequate numbers of staff, high risk and acutely ill patients. Moreover, high burnout in staff seems to cause an increase in episodes of aggression, seclusion, restraint and work injuries. A great deal of the research on burnout has therefore focused on staff from acute wards. To the best of our knowledge, burnout has not been investigated and compared among mental health professionals working with acute and non-acute patients before. Burnout is a complex concept, and in this study, it is defined as fatigue and exhaustion and not as a severe psychosocial diagnosis. Aim: The aim of the study was to investigate burnout among mental health professionals, including comparison of the level of burnout in mental health professionals working in acute and non-acute hospital settings. Methods: This cross-sectional study used the Copenhagen Burnout Inventory (CBI) and was carried out in two psychiatric clinics in the North Denmark Region as part of a larger implementation study. The participants were recruited from 8 wards (3 acute wards and 5 non-acute wards). The participants filled in a demographic questionnaire and the CBI. The CBI measures three domains of burnout: personal, work-related and client-related. Descriptive analysis of the demographic data and T-tests to compare mean scores of burnout across the two groups were performed. Results: 114 mental health professionals (101 females and 13 males) divided between 60 nurses, 47 nurse assistants and 7 others participated in the study. Acute wards accounted for 49 mental health professionals and non-acute wards for 65. The analysis is ongoing and the results from the CBI instrument as well as the demographic variables will be presented in tables and figures on the poster. Conclusion: As the analysis is ongoing, the conclusion will be presented on the poster.

No. 100

WITHDRAWN

No. 101

The “Sigmaringen Model” to Reduce Seclusion and Restraint in Psychiatry

Poster Presenter: Alex Theodor Gogolkiewicz, M.D., M.B.A.

SUMMARY:
During the past years, a vast number of activities both in research and clinical practice to reduce seclusion and restraint in psychiatry can be noted. Numerous interventions have been described in the literature and were tested in psychiatric hospitals. Nevertheless, it has been shown that the sole unsystematic propagation of these solitary successful interventions undoubtedly does not show through in the clinical practices. Measureable effects still remained low. Based on this background the idea of creating a practically relevant manual came up. We planned to combine already successful concepts in reducing seclusion and restraint in psychiatry and developed a multimodal intervention program that was evaluated in the Clinic of Psychiatry, Psychotherapy and Psychosomatic Medicine at the SRH Hospital in Sigmaringen from August 2016 to July 2017. Our clinic that consists of 88 beds spread to five wards and a day clinic has the public service obligation for the district of Sigmaringen (Germany) We treat approximately 1.400 cases in an inpatient and day-patient setting. One of the wards counting 18 beds is a mixed gender acute / closed ward, the others are open mixed gender wards. Coercive interventions almost sole take place at the closed ward that is considered an intensive care psychiatric unit. 20,4% of the cases (n=538) that were treated on this ward in 2015 underwent coercive measurements. We are a member of a nationwide consortium to reduce seclusion and restraint in psychiatry and share out numerical data with the other participants in terms of a benchmarking. Although, our official figures reflect the average among German psychiatric clinics, we felt that we have to improve our ratings as on obligation to our patients and clients. The "Sigmaringen model" connects the scaffolding of American "six core strategies" with the British "safewards model" as well as the German "DGPPN guidelines regarding measurements concerning aggressive behavior". These concepts were adapted to the conditions of a typical psychiatric clinic at a general hospital in Germany. The newly developed manual that was then introduced to our doctors, psychologists, nurses, social workers, community care givers, local judges, the hospital management as well as patient representatives in July 2016. After training our staff the implementation of the "Sigmaringen model" guidelines came into action in August 2017. During the period from August 2016 to July 2017, a significant reduction in cases of seclusion and restraint was observed. Altogether, 565 cases (+27 compared to 2015) were treated at the acute closed psychiatric ward of which only 14,4% compared to previously 20.4% of the cases had undergone restraint or seclusion using the structured proceedings of the "Sigmaringen model" manual. In total, it translates to a reduction of coercive interventions by 29,4%. We showed that a structured combination of already established and successful strategies to reduce seclusion and re

No. 102

Beyond Housing: Understanding Community Integration Among Recently Homeless Veteran Families

Poster Presenter: Elizabeth Moore, M.D.
Co-Authors: Sophie Feller, M.D., Lillian Gelberg, M.D., M.S.P.H., Gery Ryan, Ph.D., Sheryl Kataoka, M.D., Roya Ijadi-Maghsoodi, M.D.

SUMMARY:
Objective: Community integration—the experience of belonging to and functioning within a larger group—is important to address among individuals exiting homelessness. Yet, despite the national initiative to end veteran homelessness, there is a lack of public and scholarly attention to the needs of homeless veteran families, including the partners and children of veterans. Further, little is known about the stressors and barriers homeless veteran families encounter as they exit homelessness and integrate into the community. We aimed to understand the experiences, facilitators, and barriers to community integration among homeless veteran families using a community-partnered participatory research approach. Methods: We analyzed individual semi-structured interviews conducted with 18 homeless or recently homeless veteran parents and 7 providers of homeless services, for themes of community integration. We also developed a parent workgroup, using a community-partnered participatory approach, with 9 recently homeless veteran parents recruited from a permanent housing facility. Workgroups met on 4 occasions to review themes of community integration in a participatory manner and to further explore barriers. The

interviews and workgroups were all audio-recorded, transcribed, and coded for themes of community integration using in-depth content analysis. Results: Across the interviews and workgroups, our findings demonstrated that families often isolated after transitioning into permanent housing due to stressors of the transition, a desire to stay within their homes, and as a response to trauma. Parents described experiencing stigma and judgment in the community related to homelessness and veteran status. Findings from the parent workgroups revealed that families desired ongoing assistance and advocacy after obtaining permanent housing. Workgroup participants additionally hoped to improve their communication skills and improve trust with others. Conclusion: We conducted an exploratory study focused on community integration among recently homeless veteran families. Our series of qualitative, semi-structured interviews and workgroups of veteran parents identified barriers to community integration—including stigma and sequelae of personal trauma experiences—and broad needs, particularly for ongoing assistance during the critical period after obtaining housing. Our findings suggest that mental health providers, the VA, and community agencies should focus efforts on improving community integration among homeless veteran families in order to enhance overall wellbeing and improve housing outcomes among this important population.

No. 103

Development of a Program to Improve Interprofessional Trainee Well-Being in a VA Homeless Clinic

Poster Presenter: Elizabeth Moore, M.D.
Co-Authors: Michael Soh, Ph.D., Margaret Lois Stuber, M.D., Lillian Gelberg, M.D., M.S.P.H., Ellen Charles, Carole Warde, M.D.

SUMMARY:
Background: Burnout is a reaction to prolonged stress that manifests as depersonalization, cynicism, and reduced feelings of achievement. Clinicians caring for vulnerable patients are at higher risk for burnout. We developed a longitudinal intervention to prevent burnout and improve wellbeing among trainees from multiple professions caring for homeless Veterans at the West Los Angeles VA Homeless Clinic. We aimed to increase trainees' capacity to recognize stresses of medical practice and provide skills to improve resilience and mindfulness. Here we describe our needs assessment and resulting program. Methods: Trainees completed surveys to measure resilience, perceived stress, burnout, and mindfulness. Working with an invited expert in wellbeing, we developed a half-day interactive workshop on stress recognition and coping skills. A group of faculty and clinic administrators developed a second phase of the program to incorporate wellbeing strategies into daily work. Strategies include identifying a clinic "wellness room," monthly presentations of wellness concepts, and posters of wellness concepts to be displayed in the clinic. Results: 14 trainees (nurse practitioner students and residents, internal medicine residents, and one trainee each of psychiatry, psychology, and pharmacy) and their faculty participated in the initial workshop; all trainees completed surveys prior to participating. Their mean resilience score was 29.4 out of 40 points (Connor-Davidson Resilience Scale, higher score indicates higher resilience); stress score was 14.4 out of 40 points (Cohen Perceived Stress Scale, higher score indicates more stress); depersonalization score was 3.7 out of 15 points (Maslach Burnout Inventory, higher scores indicating greater burnout). Participants also answered questions related to two domains of mindfulness: the mean score for "observing" was 26.6 out of 40, and the mean for "nonreactivity to inner experience" was 24 out of 35; on both scales, higher scores indicate more mindful habits. Conclusions: The results of our needs assessment demonstrate an opportunity to improve trainee wellbeing. In particular, we found that trainee resilience scores were lower than a community sample of US adults, and their perceived stress scores were higher. All average scores indicated room for improvement. We used these findings to develop the second phase of our intervention, which aims to teach trainees skills that improve resilience and reduce stress through both lectures and graphics. In this poster, we discuss initial trainee needs, as well as the strategies and barriers for implementing a wellbeing intervention in one VA clinic. Our practices can be used to inform wellbeing initiatives for future trainees.

No. 104

Distinct Network Structure of Depression Symptoms Among Responders and Non-Responders to Antidepressants and Placebo

Poster Presenter: Venkat Bhat, M.D.
Co-Authors: Xiamin Leng, Sidney Kennedy, M.D.

SUMMARY:

Introduction: Major Depressive Disorder (MDD) is characterized by the presence of a minimum number and duration of symptoms. Specific symptoms may correspond to specific underlying dysfunctional neural circuits and to treatment outcomes in MDD such as treatment-response/relapse, chronicity and functioning. Studying the longitudinal structure of MDD symptomatology in relation to various network features such as centrality and connectivity could help identify key symptom hubs and their interrelations. Methods: Data from three 6- week randomized placebo-controlled trials with duloxetine were included (n=494 at baseline) and MADRS scores were examined at the 4 available time points: baseline (week 0), week 2, 4 and 6. The available data were categorized into 4 groups that included 180 duloxetine responders, 59 non-responders, 112 placebo responders, 143 placebo non-responders. Response was defined as ? 50% reduction in MADRS score by week 6. The MADRS data at the four available time points were each converted into a weights matrix that codes the connectivity structure between nodes in a network in matrix form. The qgraph package for R is sensitive to network visualization of relationships in psychometric data and provides an interface to visualize data through network modeling techniques. Edges in the graph were examined for statistical significance (adjusted for multiple comparison in every analysis) during each of the 4 time points using specific qgraph package modules. The emergent statistically significant network characteristics (e.g. nodes, degree, etc) were compared among subjects based on response to duloxetine/placebo and the trajectory of response to duloxetine (K-means based clustering of trajectory of response to duloxetine into fast, slow and non-responders). Results: A consistent pattern of increasing connectivity with time was noted among the duloxetine responders and replicated among placebo responders. Notably, duloxetine responders had a broad increase in connectivity across individual symptoms while the placebo responders had symptom improvement in a limited repertoire of symptoms, mainly apparent and observed sadness. Another notable network feature was the overall greater strength of connectivity among responders with greater magnitude of standard centrality features as compared to non-responders. In a manner similar to the response to medication/placebo analysis, network connectivity features that distinguished fast responders from non-responders were identified. Conclusion: The study represents the first characterization of the network architecture of MADRS in antidepressant response with consistent features seen with duloxetine and replicated with placebo among responders and non-responders. Further, many connectivity features are unique to the trajectory of response to duloxetine. The results point towards symptom specificity and their interconnectivity in antidepressant response.

No. 105

Role of Gender in Therapeutic Response and Side Effects to Methylphenidate

Poster Presenter: Venkat Bhat, M.D.
Co-Authors: Natalie Grizenko, Ridha Joober

SUMMARY:

Background: Gender-based differences have been described in children with Attention Deficit Hyperactivity Disorder (ADHD). The disorder is more prevalent in boys as compared to girls, and boys tend to have more of the hyperactive subtype. However, gender-based differences have not been well characterized in the nature of response to treatment. This project aims to examine the nature of gender-based differences in therapeutic response (TR) and side-effects (SE) in various observational settings (clinicians, parents, teachers, CPT, RASS). Methods: Children with ADHD undergo a two week double blind, randomized, cross-over clinical trial with Methylphenidate (MPH) and placebo, and information is obtained from various sources during each week. This includes the Conner's Global Index from parents (CON-P), teachers (CON-T), clinicians (CGI, GPI), and measures including CPT and RASS. The difference scores between MPH and placebo was calculated for each measure as an index of

treatment response with MPH and the various TR measures were examined using a univariate ANCOVA correcting for any significant baseline covariates. Finally, the significant SE with MPH were compared for gender-based differences of parent observer using a t test. Results: 299 children (269-male, 30-female; average age 8.9±1.8) were evaluated by 52 male teachers, 212 female teachers; 269 female parents and 30 male parents. As expected, significant treatment response was noted in all four observation settings (P<0.00). The ANCOVA analysis for teachers yielded a significant gender teacher x child interaction as noted for the baseline week, the interactions differed based on the subtype (p<0.05). For the TR ANCOVA analysis, a significant gender teacher x child interaction as noted for the Restless Impulsive subtype. The ANCOVA analysis for parents did not note any differences with treatment and observed significant differences based on the child's gender at baseline (p<0.05). Finally, the SE of decreased appetite is noted on the t test as a more frequent observation among mothers during TR. Conclusion: The TR with MPH was consistently observed in all four observation settings suggesting that MPH improved outcomes. The observation that teachers had gender-based baseline interactions unlike parents suggests that there are differences in symptom assessment between parents and teachers at baseline. Further, the observation that teachers note a gender-based treatment differences with bigger improvement for male children while parents do not suggests that TR is observed differently based on requirements of observed settings. The fact that no gender-based changes are seen on RASS, CPT and by clinicians suggests that parents and teachers have gender-based expectations of child behavior & TR. This is further supported by the result that female parents note greater decreased appetite as a SE as compared to male parents.

No. 106

Role of Observation Setting in Therapeutic Response and Side Effects to Methylphenidate

Poster Presenter: Venkat Bhat, M.D.
Co-Authors: Natalie Grizenko, Ridha Joober

SUMMARY:

Objectives: Information obtained from parents and teachers is used to initiate stimulant treatments and further titration to achieve optimal therapeutic response (TR) and minimal side effects (SE) in ADHD. This study aims to examine features of TR obtained in various observation settings (parent, teacher, RASS, CPT, clinical), and characterize the extent and nature of correlation in these observation settings at baseline and with treatment response (TR). Similarly, SE observed by parents will be examined for their impact on TR obtained from the various observation settings. Methods: Children with ADHD underwent a two-week double-blind, randomized, cross-over clinical trial with Methylphenidate (MPH) and placebo, and information is obtained from various sources during each week. This includes the Conner's Global Index from parents (CON-P), teachers (CON-T), the clinical global impression for improvement assessed by clinicians (CGI), and direct observations of child behaviors in a very structured classroom like environment (RASS), and cognitive tests evaluating continuous attention (CPT) and a consensus score for global improvement (GPI). Significant SE and other pertinent variables were used as covariates using a bivariate partial correlation analysis of TR interrelationship in the various observation settings. Results: 526 children (420-male, 106-female) with ADHD had CON-T information from 81 male teachers, 445 female teachers, and the CON-P had information from 441 female parents and 65 male parents. Insomnia, talking less, decreased appetite, stomachaches and headaches were the SE noted with MPH (p<0.05), and they were used as covariates in the bivariate correlation analysis. All the observation settings showed significant correlations at baseline (p<0.00). With MPH, the correlation between parents and teachers was mainly in the RI subtype and among boys. However, with MPH, no correlation was noted between parents and teachers and other observation settings. Further, CPT, RASS, CGI were significantly correlated among each other (p<0.00), and GPI was significantly correlated with all observations (P<0.00). Finally, the effect size of the observed correlations was small (r2 0.5 with MPH, 0. 1 with baseline, 0.2 with RASS and CPT and, 0.4 with CGI and GPI). Conclusion: The TR with MPH was consistently observed in all observation settings suggesting that MPH improved outcomes. While baseline results are correlated among all observers, TR shows variable correlation

with no correlation between parents/teachers and CPT/RASS. The results strongly suggest that there is greater heterogeneity in assessment of TR as compared to at baseline by parents and teachers. However, CPT, RASS and CGI have correlations suggesting common elements in improvement. The observed effect sizes suggest a complex interplay of many factors. The results firmly support the need to synthesize information from many sources.

No. 107

Therapeutic Response and Side Effects to Methylphenidate in ADHD: Role of Comorbidity

Poster Presenter: Venkat Bhat, M.D.
Co-Authors: Ridha Joober, Natalie Grizenko

SUMMARY:

Objectives: Population studies suggest that ADHD has high rates of comorbidity with other disorders including, oppositional defiant disorder, conduct disorder and anxiety disorders. It is important to delineate the characteristics of TR and SE observed by parents and teachers when children with ADHD are on stimulant medications in the presence of comorbidities. This project aims to examine features of therapeutic response (TR) obtained from various observation settings (parent, teacher, CPT, RASS, CGI, GPI), and characterize the impact of comorbidities in these observation settings with an emphasis on medication response. Methods: Children with ADHD undergo a two week double blind, randomized, cross-over clinical trial with Methylphenidate (MPH) and placebo, and information is obtained from various sources during each week. This includes the Conner's Global Index from parents (CON-P), teachers (CON-T), clinicians (CGI, GPI), and measures including CPT and RASS. Following examination of demographics, the CON-T, CON-P, RASS, CPT, CGI, and GPI were examined for differences based on comorbidity using an independent samples t test. Finally, the significant side-effects were contrasted by comorbidity using an independent sample t-test. Results: 526 children (420-male, 106-female) with ADHD had an average age of 8.9 (±1.8) and children with comorbidity had lower family incomes, worse scores on CBCL, more Inattentive and Hyperactive features, and a higher incidence of mothers who had smoked during pregnancy (MSDP). Among comorbidities, oppositional defiant disorder (ODD) was the most common comorbidity followed by anxiety disorders. The CON-T was not different at baseline but was significantly higher with MPH for total score and subscores ($p<0.00$), particularly in the presence of ODD ($p<0.00$). Parents noted significant differences for total score and scores at baseline but not with MPH ($p<0.00$), particularly in the presence of ODD ($p<0.00$). No significant differences were noted on RASS, CPT, CGI, and GPI based on comorbidity at baseline or on treatment. Among SE, insomnia was significantly more in the presence of comorbidity. Conclusion: Presence of comorbidity was associated with lower family incomes, higher MSDP and more severe clinical features both of which have been associated in previous studies. Teachers did not note baseline differences but noted differences with MPH and the opposite phenomenon was seen with parents. Further the observation that teachers and parents note the difference mainly for ODD but not the other major comorbidities suggests that ODD subtype leads to differential assessment of TR. The lack of response differences noted with CPT, RASS and CGI-C suggests that comorbidities might bias parent and teacher assessments. Finally, higher insomnia at baseline could contribute to smaller improvements with treatment in the presence of comorbidity.

No. 108

Who Are the App Users? Subject Recruitment in Mobile Health Studies for Schizophrenia

Poster Presenter: Venkat Bhat, M.D.
Co-Author: John Torous, M.D.

SUMMARY:

Objective: Little is known about which patients with schizophrenia actually use apps and for whom apps may be appropriate. We investigated the research literature to determine characteristics of those with schizophrenia partaking in apps studies and if they are a representative sample. Methods: We conducted a literature search for studies of smartphone apps in patients with schizophrenia. Inclusion criteria included studies using a smartphone app for duration of seven or more days in a population with a clinical diagnosis of schizophrenia or schizoaffective disorder. Results: We identified 12 studies which represented 612

participants and found that on average subjects were white (60-100%), male (60-90% %) and over 30 years of age. Only 2 out of 12 studies provided data on patients reading level, cognitive impairment, and familiarity with technology. Conclusions: Current subjects recruited into smartphone schizophrenia studies are not a representative sample. While studies have shown feasibility and positive impressions from these subjects, much remains unknown about how more diverse and representative patient samples may use apps. Future mHealth studies need to address these critical aspects of subject recruitment to conclusively demonstrate the utility and validity of mHealth.

No. 109

A Brief Psychotic Episode Possibly Triggered by Low Dose Amisulpride and Aripiprazole

Poster Presenter: Robert Rymowicz, D.O.
Co-Authors: Pallavi Joshi, D.O., M.A., Najeeb U. Hussain, M.D.

SUMMARY:

Ms. A, a 27-year-old African female residing in the United Kingdom, experienced a psychotic episode while vacationing in the United States, and was brought to University Hospital in Newark, NJ for treatment and evaluation. On evaluation, the patient was noted to be disorganized and confused, and attempted to disrobe, performed yoga, and perseverated that she was “going to get married”. The patient was tangential and evasive on evaluation, and was administered Haloperidol 5mg, Lorazepam 2mg, and Diphenhydramine 50mg. Upon awakening following prolonged rest, the patient reported that her mood was “a lot better” and the patient was able to provide a thorough and comprehensive history. The patient stated that she had been treated with Amisulpride for “psychotic depression”, and had experienced one previous “brief and transient episode of psychosis” while attempting to taper from Amisulpride to Aripiprazole in the past. Amilsupride is a second generation antipsychotic believed to be more effective than Olanzapine but less effective than Clozapine, and is not well known in the United States as it has never been made available for sale in North America. Low doses of Amisulpride preferentially block inhibitory pre-synaptic auto-receptors, facilitating dopaminergic activity and possibly explaining the effectiveness of Amisulpride for the treatment of dysthymia. Aripiprazole is a D2 and D3 partial agonist, and at low doses appears to facilitate dopaminergic activity. A low dose of Amisulpride taken together with a low dose of Aripiprazole may potentially cause excess dopamine activity, leading to possible psychosis, and may explain the speed with which this patient’s symptoms were resolved following treatment with an inverse agonist of D2 and D3 receptors, such as Haloperidol. To our knowledge, no previous case reports discuss possible psychosis triggered by low doses of Amisulpride and Aripiprazole taken together, although many have reported on the ability of either Amisulpride or Aripiprazole to be activating at low doses. To be clear, other explanations can perhaps account for the two episodes of psychosis this patient suffered while tapering from Amisulpride to Aripiprazole, but this case may nonetheless serve to illustrate some of the risks involved in administering two medications which at low doses may preferentially facilitate dopaminergic activity.

No. 110

Prescriptive Profile of Atypical Antipsychotics by Brazilian Psychiatrists

Poster Presenter: Renata Demarque, M.D.
Co-Authors: Antônio Carlos Vattimo, M.D., M.Sc., Elaine Ribeiro, Rosyanne Michele Oliveira, Stevin Zung, M.D., Ph.D.

SUMMARY:

Objective: To explore and evaluate the prescriptive profile of atypical antipsychotics by Brazilian psychiatrists. Method: A quantitative and qualitative research was undertaken with 40 Brazilian psychiatrists, which have an average of 17 years of clinical practice. Results: Aripiprazole was preferred (5% of physicians) due to not causing weight gain, causing less metabolic changes, efficacy in positive and negative symptoms, autism, bipolar disorder, refractory depression, obsessive-compulsive disorder, Tourette syndrome, elderly and patients who failed to respond to previous treatments. Olanzapine was preferred (10% of physicians) due to the rapid onset of action, efficacy in psychotic symptoms, schizophrenia and manic symptoms of bipolar disorder. Risperidone was preferred (40% of

physicians) due to an affordable cost, efficacy in aggressiveness, agitation and positive symptoms of schizophrenia, autism, anxiety disorder and obsessive-compulsive disorder. Quetiapine was preferred (45% of physicians) due to efficacy in bipolarity, improvement of depression and mood stabilization, a broad spectrum of action, as well as possible treatment of insomnia and dementias. Atypical antipsychotics were prescribed for bipolar disorder (43% of physicians), schizophrenia (32% of physicians) and other pathologies (25% of physicians). In schizophrenia, patients' profiles taking aripiprazole were: overweight, high purchasing power, negative symptoms and previous therapeutic failure; patients on olanzapine were: weight below or normal, with severe psychotic symptoms or difficult to control; patients on risperidone were: psychotic symptoms and low purchasing power or on 1st psychotic episode; quetiapine patients profile was: agitation/restlessness and insomnia. In bipolar disorder, profiles of patients taking aripiprazole were: overweight and with high purchasing power; olanzapine: weight below or normal weight, in mania/hypomania, agitation/restlessness; quetiapine: agitation/restlessness, aggression, and irritability or associated anxiety; risperidone: psychotic symptoms and low purchasing power. Conclusions: These findings are useful in clinical practice and research. Outlining the results, main attributes considered at the time of prescription was cost, faster action on aggressiveness and/or agitation and effectiveness in the positive symptoms of schizophrenia. This study was supported by Aché Laboratórios Farmacêuticos S.A.

No. 111

Relative Bioavailability Study Between Two Formulations of Desvenlafaxine Succinate 100mg Extended Release Tablet

Poster Presenter: Renata Demarque, M.D.
Co-Authors: Stevin Zung, M.D., Ph.D., Antônio Carlos Vattimo, M.D., M.Sc., Douglas Costa Morais, M.B.A., Rosyanne Michele Oliveira, José Pedrazzoli Junior, Edson Bernes Jr., M.B.A.

SUMMARY:
Background: Desvenlafaxine, an active metabolite of venlafaxine, has strong efficacy evidence for the treatment of Major Depressive Disorder (MDD) and other psychiatric conditions. Methods: To evaluate whether the formulation of 100mg of desvenlafaxine succinate extended release tablet, manufactured by Aché Laboratórios Farmacêuticos S.A., reaches plasma levels equivalent to 100mg of desvenlafaxine succinate extended release tablet of reference product commercialized by Wyeth Indústria Farmacêutica Ltda., two open-label, randomized, crossover 2x2, two treatments, two periods, two sequences studies, where everyone was randomly allocated to one of those sequences, were undertaken with 60 heath volunteers (age 18-50). One of the studies was conducted in fasting condition, while the other was in fed condition. Moreover, an additional statistical evaluation was performed to verify the PK profile, simulating steady state after repeated doses of the drugs. For this evaluation, the principle of superposition was adopted. Such a principle assumes that initial doses of drug do not affect the pharmacokinetics of subsequent doses and therefore does not presuppose any prior pharmacokinetics. This can be used to predict equilibrium information from a non-compartmental analysis from the single dose PK profile. Results: The mean values obtained for the PK parameters Cmax and ASC0-t in these assessments for both the fasting study and the standardized diet study were consistent with those reported in the literature (approximately 6,747 ng.h/mL and 376 ng/mL, respectively, for ASC0-t and Cmax). The power of the test was greater than 99.9% in all cases and the confidence intervals were well centered and contained within the bioequivalence acceptance limits, being concluded by the bioequivalence among evaluated treatments. For the steady state simulation, the steady state of desvenlafaxine was obtained after five days of treatment, information also confirmed by the literature, resulting that test and the reference product had the same behavior in continuous use. Conclusion: Considering the results of the relative bioavailability, it was possible to observe that the evaluated drugs, both in single dose and in chronic use, showed the same pharmacokinetics behavior and therefore are interchangeable in medical practice to the treatment of MDD. This study was supported by Aché Laboratórios Farmacêuticos S.A.

No. 112

Relative Bioavailability Study of Two Formulations of Zolpidem Hemitartrate: Dispersible Tablet Versus Coated Tablet

Poster Presenter: Renata Demarque, M.D.
Co-Authors: Stevin Zung, M.D., Ph.D., Antônio Carlos Vattimo, M.D., M.Sc., Douglas Costa Morais, M.B.A., Rosyanne Michele Oliveira, Eduardo Abib Junior, Edson Bernes Jr., M.B.A.

SUMMARY:

Background: Insomnia disorder is the most prevalent sleep disorder among general population and may lead to serious impacts to personal and social health. Although behavioral interventions are the mainstay of treatment, pharmacologic therapy may be necessary for some patients. Zolpidem is a non-benzodiazepine receptor modulator primarily used in the treatment of insomnia. Several studies have shown that zolpidem improves measures of sleep latency, sleep duration and reduces the number of awakenings in patients with transient and chronic insomnia. In this context, through a relative bioavailability study, a new pharmaceutical form presented as effervescent tablets of immediate release of zolpidem with dispersible technology has been developed to allows faster absorption onset of the drug and faster maximum plasma concentration achievement (Tmax) than coated tablet. Methods: An open-label, randomized, crossover, 2 treatments, 2 sequences, 2 periods study, in which the volunteers received, in each period, the effervescent tablet or the reference coated one in order to evaluate the relative bioavailability between these two products by estimating the ratios of the geometric means and their respective confidence intervals (CI 90%) of the test/reference formulations for the primary PK parameters Cmax and ASC0-t. Plasma samples containing zolpidem hemitartrate obtained from 36 healthy volunteers (age 18-50) was determined by high-performance liquid chromatography coupled to the mass spectrometer. Results: The estimate ratio between the geometric means of the Cmax of the effervescent tablet formulation of zolpidem hemitartrate 10mg and the coated tablet formulation 10mg was 105.25% [CI 90%: 96.92%; 114.29%]. The estimate ratio between the ASC0-t geometric means of the effervescent tablet of zolpidem hemitartrate and the coated tablet form was 105.11% [CI 90%: 98.77%, 112.75%]. The evaluated parameters were within the range proposed by FDA and ANVISA (National Agency of Sanitary Surveillance in Brazil), and it was concluded that the two products were bioequivalent. Also, zolpidem presented as effervescent tablets of immediate release with dispersible technology showed faster absorption onset and faster maximum plasma concentration achievement than reference coated tablet (test product Tmax:0.5h; reference product Tmax:1h). Conclusion: The dispersion of the effervescent tablet allows the solubilizing process of the active ingredient to be initiated even before the administration, innovation that guarantees a higher rate of absorption and faster time to achieve the highest plasma concentration (Tmax) for zolpidem, the hypnotic of choice for treatment of insomnia disorder. This study was supported by Aché Laboratórios Farmacêuticos S.A.

No. 113

Alzheimer's Disease: Medical Management by Brazilian Specialists

Poster Presenter: Renata Demarque, M.D.
Co-Authors: Antônio Carlos Vattimo, M.D., M.Sc., Erick Matheus Machado, Rosyanne Michele Oliveira, Stevin Zung, M.D., Ph.D.

SUMMARY:

Objective: The main purpose of this study was to analyze, in a detailed way, the aspects of Alzheimer's disease management by neurologist and geriatric's specialties. Methods: A qualitative study was conducted through interviews with 30 physicians, considering 6 KOL's of each specialty, from São Paulo (Brazil), with 21 years on average of clinical experience to access daily practice and treatments choice in each phase of the disease. Results: In the mild stage of the disease, monotherapy with cholinesterase inhibitors was preferred, while in the moderate to severe stages, the association of a cholinesterase inhibitor and memantine was chosen. In relation to the drugs currently used, the study provided information about patient's treatment per specialty. In neurology, 11% of patients were on memantine monotherapy, 27% on donepezil monotherapy, 19% on the combination therapy of donepezil and memantine; 10% of patients were on

galantamine monotherapy, 15% on rivastigmine monotherapy; 7% on association of galantamine and memantine, while 11% were on combination therapy of rivastigmine and memantine. Whereas in geriatrics, 9% of patients were on memantine monotherapy, 26% on donepezil monotherapy, 20% on associated treatment with donepezil and memantine; 10% on treatment with galantamine alone, 14% on rivastigmine monotherapy; 9% on galantamine and memantine combination; and 12% on rivastigmine and memantine combination therapy. It has been observed that donepezil was the drug with the highest number of prescriptions, regardless of the specialty. Among the associations, donepezil and memantine was the most prescribed, while galantamine and memantine association was less used in the treatment of Alzheimer's. For neurologists, donepezil is the drug of choice for the treatment of Alzheimer's disease, vascular dementia, mixed dementia and Lewy body dementia, while rivastigmine is the drug of choice for the treatment of Parkinson's dementia. For geriatricians, donepezil is the drug of choice in the treatment of Alzheimer's disease, mixed dementia, Parkinson's dementia and Lewy body dementia, while galantamine is the drug of choice for vascular dementia. Conclusion: These findings are useful in clinical practice and research. Outlining the results, the most common treatment provided both by geriatricians and neurologists in our sample is monotherapy with cholinesterase inhibitor donepezil in mild phase of AD and donepezil and memantine as combination therapy in the moderate or severe phase of AD, practice that is aligned to medical literature, which shows that concomitant use of donepezil and memantine in patients with moderate to severe AD is more effective than the use of donepezil hydrochloride as monotherapy. This study was supported by Aché Laboratórios Farmacêuticos S.A.

No. 114

Fixed-Dose Combination of Donepezil Hydrochloride and Memantine Hydrochloride for Treatment of Moderate to Severe Alzheimer's Disease

Poster Presenter: Renata Demarque, M.D.
Co-Authors: Stevin Zung, M.D., Ph.D., Antônio Carlos Vattimo, M.D., M.Sc., Douglas Costa Morais, M.B.A., Rosyanne Michele Oliveira, Edson Bernes Jr., M.B.A.

SUMMARY:
Background: Alzheimer's disease (AD) accounts for approximately 75% of total dementia cases worldwide and is projected to affect 115.4 million people in 2050. As the world's population is rapidly aging, AD will clearly pose a major health problem in the near future. Although AD prevalent population is high, few AD patients are treated, many of them have comorbidities and are polymedicated, which leads to a problem of treatment compliance. With the purpose of improving AD patients and caregivers' treatment compliance, a Brazilian Pharmaceutical Company developed a fixed dose combination (FDC) of donepezil and memantine, mainstays of treatment in AD's dementia, for the treatment of moderate to severe AD. Methods: The FDC (Donila Duo®) was developed considering physical chemical and PK parameters (T1/2, Kel) of the drugs as well as the lack of PK interaction between the molecules. To assess the PK behavior of the developed FDC, a relative bioavailability study was performed comparing Donila Duo® with reference products (Ebix® - Lundbeck Brasil Ltda. and Eranz® - Wyeth Pharmaceutical Industry Ltd.). Plasma samples containing donepezil and memantine obtained from 36 healthy volunteers (age 19-49) were quantified by HPLC/MSMS equipment. Results: Physical chemical, including, content, uniformity and dissolution results showed that FDC tablets meet all necessary standards and good manufacturing quality control practices. Regarding the relative bioavailability study, the evaluated parameters were within the range proposed by FDA and ANVISA (National Agency of Sanitary Surveillance in Brazil), and it was concluded that the 20mg tablet of memantine associated to 10mg of donepezil was bioequivalent to the concomitant administration of 2 tablets of Ebix® 10mg and 1 tablet of Eranz® 10mg. Thus, the test result indicated that the FDC presented the same PK profile of isolated drugs. Conclusions: According to medical literature, concomitant use of donepezil and memantine in patients with moderate to severe AD is more effective than the use of donepezil hydrochloride or memantine hydrochloride as monotherapy. In addition, an FDC facilitates dosing and contributes to increasing treatment compliance, since it considers the similarity of elimination half-

life of components and permits a single daily dose. Also, the FDC does not interfere with both drug's efficacy and tolerability. In conclusion, an FDC of donepezil and memantine meets the recommendations of main guidelines for treatment of moderate to severe stages of AD and aims to benefit patients and caregivers with its unique formulation. This study was supported by Aché Laboratórios Farmacêuticos S.A.

No. 115

Cost-Efficacy Study in Patients With Psychotic Disorder Treated With an Atypical Depot Antipsychotic

Poster Presenter: Aida Alvarez
Co-Authors: Pilar Andres, Carmen Martin, David Gonzalez, Carolina Lorenzo, Juan Matias

SUMMARY:

Objectives: Schizophrenia is a chronic disease with severe and multiple symptoms. Accounting for direct and indirect costs, it presents a substancial burden to the social and health-care system. Most of these expenses stem from medication nonadherence, which involves a great risk of relapse and hospitalization (in our country it means the 35.8% of total costs). Many patients treated with oral antipsychotics are readmitted during next year after discharge (1). This issue could be improved by using a long-deposit-injectable atypical antipsychotic. Our goal is to check if long-injectable atypical antipsychotics reduce the rate of readmissions in our medium.[2] [3] Methods: Descriptive analysis of a two-year (2015 and 2016), prospective naturalistic study, at the Psychiatry Inpatient Unit (UHS), we checked for the type of 2nd generation depot antypsychotic treatments prescribed, diagnosis and hospital readmissions after being discharged, with a follow up till August 2017. Results:We got a sample of 113 patients, 68 males and 45 females. 68 were treated with paliperidone palmitate and 45 with aripiprazole one-monthly. The minimum age is 21 years, and the maximum 82 years. Among the 113 patients included who were discharged from the hospital after being treated with a depot atypical antypsychotic. 67, patients having Schizophrenia; 9 Delirious Disorder; 9 Bipolar Disorder, 13 Schizoaffective Disorder; 8 Intellectual disability and 7 Psycosis related with toxics A group of 68 were treated with Palmitate Paliperidone, 56 did not readmitted until nowadays, 12 of them were readmitted due to lack of adherence in 6 cases and due to family problems in the others cases.The other 45 were treated with aripiprazole one-monthly. 30 did not readmitted until nowadays. 15 were readmitted: 9, after quitting treatment, 1 due to family problems, 2 (due to inefficiency, 2 due to behavioral disturbances and 1 due to toxic use.Of the 68 patients with Palmitate Paliperidone, 10 were on monotherapy. Of the remaining 58 with concomitant treatment, 28 received another antipsychotic, mainly. On the other hand, of the 45 treated with aripiprazole one-monthly, 4 were in monotherapy, and of the 41 with concomitant treatment, 13 received just oral aripiprazole. The remaining 28 patients received another concomitant oral antipsychotic. Conclusions: Long-injectable depot atypical antipsychotics are an optimum and cost-effective treatment option, once have proved to to decrease number of readmission rates, improving the economic, social and health-care cost of this pathologies. Palmitate Paliperidone has been shown to have a lower index of readmissions than monthly Aripiprazole, in addition to presenting less need for concomitant antipsychotic therapy.

No. 116

Targeting Glutamate in the Treatment of Mood Disorders With Memantine: A Case Report and Literature Review

Poster Presenter: Adeyemi G. Marcus, M.D.
Co-Author: Gabriela Feier, M.D.

SUMMARY:

Background: With the growing evidence that glutamate plays a vital role in the neurobiology of psychiatric disorders (1, 2), many drugs that target this excitatory neurotransmitter have gained traction in the treatment of psychiatric disorders. Ketamine is one of those drugs that targets the N-Methyl-D-Aspartate (NMDA) receptor and has shown good evidence to be beneficial in the treatment of mood disorders. However, use of ketamine requires providers to be comfortable with using this drug. A similar drug that has NMDA receptor antagonism activity is memantine, which many providers may be more comfortable in prescribing as it is often used in the treatment of

moderate to severe Alzheimer's disease, for which it has FDA approval. With a similar mechanism of action and a higher comfort in prescribing, memantine may be a good choice to target glutamate in the treatment of mood disorders. Methods: We will present a case of a 33 yr old female who presented to us in the integrated care setting. She reported mood symptoms of increased sleep, irritability, distractibility, impulsivity (especially related to anger outbursts) and hyperactivity. With her symptoms and gathered history our working diagnosis was unspecified bipolar disorder. Her symptoms improved after treatment with memantine. We also reviewed the literature to better understand the pharmacology of memantine and its effect on the NMDA receptor. Results: Our patient responded well to memantine treatment. We tried treating her with conventional bipolar treatment agents including valproic acid, quetiapine and lurasidone, which were not effective for her. Furthermore, she disclosed that a neurologist had once treated her mood symptoms with dextromethorphan/quinidine which has FDA approval for treatment of pseudo bulbar affect. Dextromethorphan's major metabolite acts as an NMDA receptor antagonist, which prompted us to give her an off label trial of memantine. After initiation of this treatment, her symptoms improved as memantine was titrated to an effective dose. Conclusion: Glutamate dysfunction plays a role in many psychiatric disorders. Although it is not fully understood, drugs that target glutamate through NMDA modulation can help in the treatment of mood disorders. Zydanys et al in 2008 showed that memantine is often used off label in many psychiatric disorders. Our literature review and case study suggests that in certain cases glutamate modulation may be helpful in the treatment of mood disorders in mono and combined therapy. At times, may be more beneficial than conventional treatment options.

No. 117

Acute Decompensation of Severe OCD Managed With Clomipramine After Cigarette Relapse

Poster Presenter: Andrew Buchholz
Co-Authors: Keelan K. O'Connell, M.D., Patcho N. Santiago, M.D.

SUMMARY:
Mr. X is a 56-year-old Caucasian male with a past psychiatric history of obsessive-compulsive disorder refractory to multiple adequate trials of high-dose SSRIs but had found primary relief of his symptoms after initiating clomipramine one year prior to his current presentation. The patient also had a 40 pack-year history of cigarette smoking, having quit approximately 10 years ago. The patient, normally fastidious in making his appointments, presented to his outpatient psychiatrist 2 months late after missing three scheduled appointments. During this appointment, the patient's obsessions of contamination, previously in remission, had decompensated so severely that he was unable to sit down in the office for fear of disease transmission. The patient refused the Y-BOCS at this time secondary to anxiety and a desire to return home, but stated that his symptoms were so severe that he struggled to leave home and was fired from his current job. It was discovered at this patient encounter that the patient had returned to cigarette smoking approximately three months upon his retirement from the Armed Forces and return to civilian employment. Although he had been taking his clomipramine levels as prescribed, blood levels demonstrated a subtherapeutic concentration. Citing intolerance of anticholinergic side effects, Mr. X refused a dose increase of clomipramine. However, he was prescribed nicotine replacement therapy and he agreed to abstain from cigarettes. Within six weeks of smoked tobacco cessation, his OCD symptoms returned to baseline per subjective report and Y-BOCS measurements. Additionally, his clomipramine returned to therapeutic levels. Although tricyclic antidepressants are being utilized fewer times in modern clinical practice, they still play a very important role in psychiatry. As such, it is imperative to recognize their pharmacodynamics and pharmacokinetic attributes to prevent patient harm. This presentation will review the cigarette smoking's effects on clomipramine via CYP1A2 induction. Additionally, it will discuss other potentially harmful drug, herb, and lifestyle interactions with tricyclic antidepressants to improve individual provider pharmacovigilance and overall patient safety.

No. 118

Successful Treatment of Delusional Infestation With Lurasidone: A Potentially Safer Alternative?

Poster Presenter: Andrew Buchholz
Co-Authors: Christina Lorraine La Croix, D.O., Patcho N. Santiago, M.D.

SUMMARY:
Mrs. X is a 59-year-old Caucasian female with a past psychiatric history of posttraumatic stress disorder, major depressive disorder, somatic symptom disorder, and delusional infestation. Her psychiatric treatment has been compromised by her significant medical history, which includes fibromyalgia and multiple orthopedic conditions that have left her wheelchair bound. The patient's delusional infestation had been successfully controlled with risperidone for four years. However, she self-discontinued the medication secondary to weight gain and somnolence. Approximately one month after risperidone discontinuation, the patient presented to the emergency department seeking a dermatological consult for the "huge worms" that she believed were emanating from her skin. The patient had multiple excoriations on her arms, chest, and face from scratching. She agreed to psychiatric consultation and voluntary hospitalization. During her admission, she refused to restart risperidone or initiate the antipsychotic agents classically used to treat delusional infestation – haloperidol and pimozide. The patient's QTc of 452ms precluded the use of ziprasidone. Lurasidone was offered to the patient and she consented to a trial. Within two weeks of lurasidone initiation, her delusions of infestation remitted and she has now been symptom-free for 18 months. To our knowledge, this is the first report of successful treatment of delusional infestation with lurasidone. Delusional infestation is a rare but serious psychiatric condition that has proven difficult to study. Indeed, the majority of the research in this field has come from case studies and case series. This presentation seeks to improve provider awareness of this condition and discuss a new potential avenue for treatment. Patients with delusional infestation are typically older and have multiple medical conditions requiring polypharmacy. Agents that have been typically used in delusional infestation treatment – haloperidol, pimozide, ziprasidone, and risperidone – have significant risks in this population. As such, lurasidone may be a very attractive treatment option in light of its minimal cardiac effects, lower risk of metabolic abnormalities, and fewer pharmacokinetic interactions. Further study is highly encouraged.

No. 119

Does One Size Fit All in "Personalized Medicine?" Psychosocial Predictors of Choosing Pharmacogenomic Testing in an Outpatient Psychiatric Clinic

Poster Presenter: Maggie Marie Driscoll, M.D.
Co-Authors: Patrick L. Kerr, Ph.D., Fahd Mousa, M.D., Muhammad Jamal Shah, M.D., Mounika Ganguly, M.D., Carol D. Freas, M.D., Gurtej Gill, M.D.

SUMMARY:
Background: Pharmacogenomic testing (PGT) may help identify the best medicines for a patient based on genetic testing. Both benefits and risks of such testing have been identified. The availability of several commercial PGT services has increased over the past decade. However, there is a limited understanding of why, when, and how patients decide to request this testing because little research has focused on those factors. The Comprehensive Model of Information Seeking (CMIS) is a system of understanding how, why, and when people seek health information, and may be useful in understanding these factors in PGT. A clearer understanding of the factors that are important to patients when deciding to obtain PGT will allow for better patient education about PGT. This study aims to: (1) determine the relationships between perceived risks and benefits of PGT for psychiatric medications and probability of requesting PGT from a psychiatrist; (2) identify thoughts, feelings, behaviors and life factors that moderate the relationship between risks and benefits and probability of requesting PGT; (3) identify the relationship between subjectively predicted behavioral and emotional responses to learning disease gene-carrier status and probability of requesting PGT; (4) identify preliminary evidence for the application of the CMIS to PGT. Methods: An a priori power analysis indicated that 90 participants would be needed for an effect to be detected using the data analytic plan. Thus, participants consist of 90 adult new patients (10 have been recruited thus far) presenting for treatment in an outpatient

psychiatry department, who were naïve to genetic/genomic testing. Participants completed the following tasks in a lab using a computer interface: (1) participants rated their expected emotional response, expected risk, and potential changes in behavior in response to an imagined scenario in which they are given genetic testing results indicating they have one or more genes for a psychiatric disorder they did not previously know they had. (2) participants were provided with a description and proposed benefits and risks of PGT, and were asked to rate the probability (0-100%) that they would request PGT based on those risks and benefits. (3) participants completed questionnaires, including the Symptom Checklist-90-R, Multidimensional Health Locus of Control Scale, Sheehan Disability Scale, and questionnaires asking about demographic data, health status, health history, and family health history. Data Analysis: Structural equation modeling (SEM) will be conducted to test hypotheses. SEMs will be developed to predict probability of requesting PGT. Potential risks of PGT will be entered as predictors in SEMs. Self-rated probability of emotional reactions, cognitive appraisal of risk, and predicted behavioral changes will be entered in the SEM as moderator variables. Conclusions: Implications for improvements in patient care delivery related to PGT will be discussed.

No. 120

Are We Making the Most of Clozapine? A Cross-Canada Survey

Poster Presenter: Reinhard Dolp, M.D., M.Sc.

SUMMARY:

Background: Clozapine is considered the gold-standard medication for treatment-resistant schizophrenia worldwide. However, its usage varies greatly ranging from 60% in the People's Republic of China to 3% in certain areas of Canada and the United States of America. This cross-Canada survey explores physician-identified barriers in prescribing Clozapine. Methods: This is a cross-sectional, proportional random sample of 10% (n=454) psychiatrists registered as Fellows with the Canadian Royal College of Physicians and Surgeons (CRCPS), who were surveyed about their Clozapine prescribing practice and their concerns and barriers in prescribing this drug. Descriptive analysis consisted of means, percentages, and frequency counts, and clozapine "prescribers" were compared to "non-prescribers" using Mann-Whitney U and Chi-squared tests. Results: Overall, 244 psychiatrists responded to our survey (response rate of 53.7%). Even though 94% are aware of the current Clozapine prescribing recommendations, only 65% follow them in their own practice. 22% of respondents said they have never prescribed Clozapine themselves and were significantly more likely to be concerned about side-effects, pt. mortality, litigation, and overall care management than those who have. The most common reasons for not prescribing this drug was the Patient's concern about adverse effects in 21%, complexity of the follow-up process (18%), and access to adequate follow up (16%). Lack of familiarity and/or confidence was the least important reason for not prescribing clozapine (45%). Agranulocytosis was the most concerning side effect for patients and psychiatrists (35% and 38% respectively). When asked what would change their current clozapine prescribing practice, 36% named the ability to refer to a subspecialist expert in Clozapine, followed by better prioritization of Clozapine training in residency (33%), more teaching and seminars about this topic (31%), and better access to inpatient psychiatry beds (29%). Conclusion: Clozapine use in Canada is below the recommendations for various reasons. Providing more education for young psychiatrists as well as supervisors about managing the potential adverse effects, and easier access to initiating and maintaining clozapine treatment will be helpful in promoting its use.

No. 121

WITHDRAWN

No. 122

Clinical Development of AXS-05 for Treatment Resistant Depression and Agitation Associated With Alzheimer's Disease

Poster Presenter: Cedric O'Gorman

Co-Authors: Amanda Jones, Kellie Kennon, Robert Niecestro, Herriot Tabuteau

SUMMARY:

Objectives: There are limited treatment options for

patients suffering from treatment resistant depression (TRD) and agitation associated with Alzheimer's disease. An innovative, oral investigational agent, AXS-05, is in late-stage clinical development for both conditions. AXS-05 is a unique, fixed-dose combination of bupropion and dextromethorphan. Bupropion, a well-established antidepressant, serves to increase the bioavailability of dextromethorphan via inhibition of CYP2D6 leading to clinically relevant plasma levels. Pharmacologically, dextromethorphan is an NMDA-receptor antagonist, a sigma-1 receptor agonist and a reuptake inhibitor of both norepinephrine and serotonin. Bupropion is a norepinephrine and dopamine reuptake inhibitor and a nicotinic receptor antagonist. Strong preclinical and clinical data support the use of both bupropion and dextromethorphan for neuropsychiatric conditions. AXS-05 represents a potential therapeutic with both pharmacokinetic and pharmacodynamic synergies. Design: Three Phase 1 studies were completed to assess the pharmacokinetics of dextromethorphan after AXS-05 dosing in over 100 healthy volunteers. A variety of doses of dextromethorphan and bupropion were used in these studies. An ongoing Phase 3 randomized, double-blind, active-controlled, 12-week study (STRIDE-1) is evaluating the efficacy and safety of AXS-05 in subjects with TRD. This study consists of a 6-week open-label, bupropion lead-in period, and a 6-week double-blind treatment period. The Montgomery-Åsberg Depression Rating Scale (MADRS) total score is the primary efficacy outcome measure in this study. An ongoing Phase 2/3 randomized, double-blind, placebo-controlled 5-week study (ADVANCE-1) is evaluating the efficacy and safety of AXS-05 in subjects with agitation associated with Alzheimer's disease. The Cohen-Mansfield Agitation Inventory (CMAI) score is the primary endpoint in this study. Results: In the Phase 1 trials, which randomized over 100 subjects, co-administration of bupropion and dextromethorphan resulted in significantly higher plasma levels of dextromethorphan as measured by AUC and Cmax. No significant differences were observed in the rates or types of adverse events between groups administered AXS-05 and bupropion alone. The TRD study is expected to enroll approximately 350 subjects. The Alzheimer's agitation study is expected to enroll approximately 435 subjects. Conclusion: TRD and agitation associated with Alzheimer's disease continue to lack appropriately safe and effective treatments. Along with a strong clinical and mechanistic rationale for the development of AXS-05 as a novel fixed-dose combination of dextromethorphan and bupropion for these conditions, our Phase 1 results demonstrate pharmacokinetic synergy with increased dextromethorphan bioavailability. Late-stage clinical programs with AXS-05 in TRD and agitation associated with Alzheimer's disease are ongoing.

No. 123

Improvement in At-Home Functional Impairment With DR/ER-MPH in Children With ADHD: Post Hoc Analysis of BSFQ and PREMB-R by Norm-Referenced Cut-Offs

Poster Presenter: F. Randy Sallee
Lead Author: Stephen Faraone
Co-Authors: Timothy Wilens, Steven Pliszka, Bert DeSousa, Bev Incledon, Jeffrey Newcorn

SUMMARY:
Background: In a pivotal phase 3 trial in children with attention-deficit/hyperactivity disorder (ADHD), evening-dosed DR/ER-MPH, a delayed-release and extended-release methylphenidate (formerly HLD200), significantly improved ADHD symptoms and reduced at-home functional impairment compared with placebo, as measured by two validated rating scales – the Before School Functioning Questionnaire (BSFQ) and the Parent Rating of Evening and Morning Behavior Scale, Revised (PREMB-R). Recently, age-adjusted norm-referenced cut-offs for the BSFQ as well as the PREMB-R morning (PREMB-R AM) and evening (PREMB-R PM) subscales were determined from a survey of 1200 respondents from a representative U.S. sample of primary caregivers of youth (6–17 y). This post hoc analysis of the pivotal trial data evaluated BSFQ and PREMB-R AM and PM responses by the norm-referenced cut-offs. **Methods:** Data were analyzed from a randomized, double-blind, multicenter, placebo-controlled, phase 3 trial of DR/ER-MPH in children (6–12 y) with ADHD (NCT02520388). Total BSFQ and PREMB-R AM and PM scores were evaluated using the age-adjusted cut-offs defined for screening risk (80th percentile); mild (90th percentile); moderate (93rd percentile);

and severe (98th percentile) at-home functional impairment at baseline and following three weeks of treatment. Pairwise comparisons of baseline and week 3 scores were performed for each participant. **Results:** In this pivotal phase 3 trial of DR/ER-MPH, the majority of participants at baseline were considered at or above screening risk (80th percentile) for at-home functional impairment by norm-referenced cut-off points in both the DR/ER-MPH and placebo groups (BSFQ: 98% and 96%, PREMB-R AM: 86% and 77%, PREMB-R PM: 94% and 91%, respectively). After three weeks, the proportion of participants considered at screening risk for at-home functional impairment decreased substantially in both treatment groups, with fewer participants in the DR/ER-MPH remaining above the threshold compared with placebo (BSFQ: 32% vs 58%, PREMB-R AM: 23% vs 43%, PREMB-R PM: 49% vs 68%, respectively). Similar trends were observed for the 90th, 93rd, and 98th percentile cut-offs and will be presented. For participants with evaluable scores at both timepoints, a greater proportion of the DR/ER-MPH group versus placebo demonstrated changes from severe at-home functional impairment at baseline to below the threshold of screening risk at week 3. **Conclusion:** Norm-referenced percentile cut-off points for BSFQ and PREMB-R can be used as a helpful guide for clinicians in determining the severity of ADHD-related at-home functional impairment among youth and for monitoring treatment effects. In this post hoc analysis of a phase 3 pivotal trial, three weeks of treatment with DR/ER-MPH demonstrated an improvement in the proportion of participants at each severity threshold for measures of at-home functional impairment versus placebo.

No. 124

Principles of Mindfulness Based Cognitive Therapy Utilized During Ketamine Treatment Achieve a Robust Response in a Suicidal Patient

Poster Presenter: Robin Martin, D.O.
Co-Authors: Richard Szuster, M.D., Brett Y. Lu, M.D., Ph.D.

SUMMARY:

Mindfulness based cognitive therapy (MBCT) has proven to be effective in relapse prophylaxis in previously depressed patients. Meanwhile, ketamine has emerged as a safe and effective treatment for treatment resistant depression (TRD) with a response that is typically rapid but often temporary, perhaps due to lack of reinforcement of nascent neurogenesis. The efficacy of mindfulness based practice and ketamine therapy may both be due to increased activity and synaptogenesis in the prefrontal cortex promoting greater emotional regulation and executive function. We hypothesize that combining these two approaches in depressed patients may potentiate the effects of either treatment alone, leading to a rapid and sustainable antidepressant effect. Principles of MBCT, such as encouraging a mindful state that supports acceptance of current experience without judgment or reactivity, were employed during a ketamine infusion of a suicidal patient admitted to our psychiatric inpatient unit who had an unimpressive response to an initial ketamine treatment. This patient's MADRS score decreased from 36 to 33 with a single treatment of ketamine using a standard infusion protocol of 0.5 mg/ kg over 40 minutes. A combined approach incorporating MBCT principles of accepting and allowing for emergent experience during and after the ketamine infusion in a single session resulted in a decline in MADRS score to 13. This patient exhibited a profound emotional response to the treatment, gained insight into the nature of his illness, was no longer suicidal and was subsequently discharged. These results may be confounded by a kindling effect of repeat ketamine treatments, however the patient's subjective experience and robust clinical response may indicate a promising approach in the treatment of TRD.

No. 125

Expanding Measurement-Based Care to Inpatient Psychiatric Facilities: Pilot Study of PHQ-9 Changes During Depression Treatment With and Without ECT

Poster Presenter: Regina Bussing, M.D.
Co-Authors: Tessy M. Korah, M.D., Deborah Morrison, Dana Mason, Almut Winterstein, Maria Bolshakova, Megan McBride

SUMMARY:

Background: Measurement-based care (MBC), the systematic administration of validated symptom rating scales, such as the Patient Health

Questionnaire (PHQ-9), has been shown to improve psychiatric outcomes in ambulatory care settings, but not yet been systematically investigated in inpatient psychiatric facilities (IPFs). Expansion of MBC to IPFs is a timely opportunity for quality improvement, with the Center for Medicare and Medicaid promoting use of patient-reported outcomes such as the PHQ-9 across all care settings. This observational pilot study reports on PHQ-9 and Beck Depression Inventory-II (BDI-II) changes during inpatient treatment for major depression, to (1) describe depression symptom reduction for patients treated with and without ECT, and (2) explore psychometric performance of the PHQ-9 in IPF settings. Method: Admission and discharge PHQ-9 and BDI-II questionnaires were obtained from 96 adults (58% female) ages 18 to 84 years (mean age 50 years (s.d. 16), admitted with depression (85% unipolar; 15% bipolar with depressed episode) at an academic psychiatric program, with 61 (64%) receiving ECT during their stay. For aim 1, we calculated within- and between treatment group t-tests and effect size d for admission and discharge questionnaire scores, and for aim 2, assessed PHQ-9 and BDI-II reliability (Cronbach's alpha), and concurrent validity (Pearson correlations) between PHQ-9 and BDI-II scores at admission and discharge. Results: Average stays lasted 14.9 (s.d. 9.7) and 4.9 days (s.d. 2.2) for ECT and non-ECT patients, respectively. Questionnaire completion occurred within 2 days of admission/discharge for 69%/82% of ECT patients, and for 97%/100% of non-ECT patients. PHQ-9/BDI-II scores decreased from 20.3 (s.d. 4.9)/34.7 (s.d. 11.0) to 11.0 (s.d. 6.4)/17.7 (s.d. 12.9) in ECT patients ($p < .001/<.001$; d 1.7/1.4), and from 19.0 (s.d. 4.6)/34.4 (s.d. 9.5) to 8.4 (s.d. 6.3)/14.8 (s.d. 11.6) in non-ECT patients ($p < .001/<.001$; d 1.97/1.87). ECT and non-ECT patients did not differ in admission, discharge, or change scores. Cronbach's alpha estimates indicated acceptable reliability for the PHQ-9 (0.77) and BDI-II (.88). Furthermore, PHQ-9 and BDI-II scores were significantly correlated at admission ($r=.50$; $p < .01$), and discharge ($r=.70$; $p < .01$). Conclusion: During IPF stays for depression treatment with and without ECT, both treatment groups reported significant symptom reduction on the PHQ-9, a questionnaire with established utility for MBC in ambulatory care settings, despite the much shorter inpatient treatment time period relative to episodes of follow-up during outpatient care. The brief, non-proprietary PHQ-9 questionnaire performed equally well as the longer, commercially available BDI-II. These results show promise for the usefulness of the PHQ-9 as a tool for quality improvement efforts, if larger scale studies confirm results of this pilot initiative, and may inform MBC initiatives for IPF settings.

No. 126

Lithium and Cognition: Here Today, Gone Tomorrow

Poster Presenter: Jamey Adirim, M.B.B.S., B.A.
Co-Authors: Zachary Adirim, M.D., B.A., Pallavi Nadkarni, M.D., M.B.B.S., M.Med.

SUMMARY:

Introduction Lithium, an effective treatment for mood disorder, is associated with cognitive side-effects that reduce patient compliance and satisfaction (Young et al, 2007; Pachet et al, 2003). Across previous studies, lithium has been found to slow down processing speed/reaction time and has been found to have a deleterious effect on short-term memory (López-Jaramillo et al, 2010; Pachet et al, 2003). Conversely, recent studies have also suggested that lithium may have important neuroprotective effects (Forlenza et al, 2011). Case Report A 57-year-old female with a 30-year history of lithium treatment was referred to a Consultation-Liaison Psychiatry Outpatient Clinic for medication review after recent acute kidney injury. Previous records were not available, and it was unclear whether lithium had been prescribed for treatment of Bipolar I Disorder, or as an adjunct alongside imipramine for a depressive disorder. In depth history-taking revealed that lithium had most likely been prescribed as an adjunct, and as well, revealed a 3-year history of increased sleep and cognitive problems, including memory, concentration, and processing speed issues, that required retirement from work and reduction of daily activities. Over the course of two further consultations across 8 months, lithium was slowly tapered down and discontinued (from a dose of 1050mg per day in divided dosing). At the time of the final consultation, improvements in sleep, memory, concentration, spontaneity, and alertness was reported by the patient and her husband, as well as the treating psychiatrist.

Furthermore, there were no mood changes, either in the form of depression or mania. Discussion and Conclusion While studies do suggest that lithium can have neuro-protective effects, this case demonstrates lithium's ability to impair concentration, memory, and processing speed. Given that lithium has been found to be both protective and deleterious to cognitive performance, this case highlights both the importance of reviewing lithium prescriptions frequently, and collaborative practice between primary care and psychiatry.

No. 127

Canadian Medical Students' Perceptions of Mental Health-Related Stigma in the Medical Community

Poster Presenter: Rachael Houlton
Co-Authors: Brandon Maser, Bilal Kobeissi, Marlon Danilewitz, Erica Frank

SUMMARY:
Background: Medical students report high rates of some mental illnesses (including burnout), and may also experience high levels of mental health related stigma. Fears of lack of confidentiality and negative impacts on their careers may discourage students from seeking personal treatment and support for mental illness, and stigmatizing attitudes can also hinder patient care. This study investigated Canadian medical students' perceptions of mental-health related stigma within the medical community, and the factors associated with these perceptions, using data collected by the 2016 "CFMS-FMEQ National Medical Student Health and Well-being Survey." Methods: An electronic survey on mental and physical health was sent to all Canadian medical students across 17 medical schools (N=11469; response rate = 40.2%). Survey items included 12 Likert-scaled statements regarding attitudes towards mental health. Factor analysis identified four statements which reliably assessed students' perceptions of how physicians view other physicians with mental illnesses, the cumulative responses to which formed a "Perceived Stigma Scale". Regression analysis was performed to explore which factors were associated with higher perceptions of stigma. Results: Overall, Canadian medical students perceive high levels of mental health stigma within the medical community: 33% of students agree that "Many doctors think less of doctors who have experienced depression or an anxiety disorder". Students with a diagnosed mental illness and/or those currently experiencing psychological distress perceive higher levels of stigma than their peers. A large proportion of students also cited stigma related reasons for deterring them from seeking help for depression or anxiety, and students who perceive higher levels of stigma were less likely to feel comfortable seeking help. Conversely, perceived levels of stigma were lower among those who feel that their medical school tries to minimise their stress. Conclusions: Canadian medical students perceive large amounts of mental health related stigma within the medical community. By assessing factors associated with perceived stigma, we can better target interventions to reduce stigma and its negative consequences within the medical community.

No. 128

Network Model of Depressive and Manic Symptoms in the Step-BD Study

Poster Presenter: Cynthia Siu
Co-Author: Carla Brambilla

SUMMARY:
Background: Bipolar disorders are characterized by mood swings that involve episodes of mania and depression, and changes in sleep, energy, thinking and behavior. This study applies network analysis approach to examine the interactive effects of depressive and manic features at the level of individual symptoms, using data from the National Institute of Mental Health's Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD) study. We tested the hypotheses that "sleep disturbance" symptom, an overlapping symptom in depressive and manic features, explained, in part, the complex presentations of manic-depressive illness. Methods: Patients in STEP-BD who met DSM-IV criteria for bipolar I or bipolar II were included in this analysis (N=3730). We applied the partial correlation network model with graphical LASSO to analyze the interactive relationships of Montgomery-Åsberg Depression Rating Scale (MADRS) and Young Mania Rating Scale (YMRS) items. Pair-wise partial correlations between symptoms were tested using Holm multiple testing procedure at alpha 0.001. Results: The overall

network shows clustering patterns of depressive and manic symptoms (nodes) within the disorder, and significant direct connections between the disorders through the overlapping “sleep” symptoms (bridge symptom) as assessed by YMRS (item 4) and MADRS (item 4). Correlation between SLEEP YMRS item 4 and SLEEP MADRS item 4 was 0.74 (Spearman rank correlation, P < 0.001). Absence of bridge Symptoms (both MADRS Sleep item 4 = 0 and YMRS Sleep item 4 = 0) was associated with significantly less manic and/or depressive symptoms, and predicted greater improvement of MADRS score at month 6. Increased depression-mania links (1 - 3) were associated with greater symptom severity, as assessed by MADRS and YMRS scores. Conclusion: Most patients experience mixed features of manic and depressive symptoms in bipolar I and II. The complex patterns of these mixed features were characterized by the nature, number, and severity of symptoms. Our findings suggest that “sleep” symptoms which occur in both mania and depression play a particularly important role in bridging the clusters of manic and depressive symptoms. Network model can be a useful approach for identifying interrelationships among symptom and pathways that moderate treatment response and outcome in specific psychiatric conditions.

No. 129

Inflammatory Markers and Cognitive Performance in Patients With Schizophrenia Treated With Lurasidone

Poster Presenter: Brian Miller
Co-Authors: Andrei A. Pikalov, M.D., Ph.D., Cynthia Siu, Michael Tocco, Joyce Tsai, Philip Harvey, Antony David Loebel, M.D.

SUMMARY:
Background: Recent studies have linked inflammation, obesity, and lipid dysregulation with cognitive impairment, a core feature of schizophrenia. Elevated C-reactive protein concentration has been shown to be a reliable biomarker for inflammatory states. We conducted an exploratory analysis to investigate the potential influence of inflammation, obesity and lipid metabolism on changes in symptom severity and cognitive performance in patients with schizophrenia treated with lurasidone. Methods: Patients with acute exacerbation of schizophrenia were treated with one of two fixed doses of lurasidone (80 or 160 mg/day), placebo, or 600 mg/day quetiapine XR in a 6-week double-blind study. A wide-range CRP (wr-CRP) assay (equivalent to high sensitivity CRP assay) was used to assess levels of inflammation. CRP was evaluated as a logarithm transformed (log) continuous variable and as a categorical variable divided into low (= 2 mg/L), medium (> 2 mg/L and = 5 mg/L) and high (> 5 mg/L) subgroups. Cognitive function was assessed with the CogState computerized cognitive battery at baseline and week 6 endpoint. Nonparametric bootstrap resampling method was applied to estimate the main and interactive effects of CRP on ranked cognitive scores. Results: Elevated level of wr-CRP (log) was associated with cognitive impairment at study baseline (P < 0.05), with significantly lower cognitive performance in the subgroup with high wr-CRP (> 5 mg/L) compared to those with low wr- CRP (< 2 mg/L) at study baseline (P < 0.05). Higher level of CRP (log) was also associated with significantly greater symptom severity as assessed by PANSS score, as well as higher BMI/body weight, and lower levels of high-density lipoprotein (HDL) and high hemoglobin A1c (HbA1c) at study baseline (P < 0.05). No significant associations were found for wr-CRP (log) with low-density lipoprotein (LDL) and total cholesterol at study baseline. High wr-CRP level (> 5 mg/L) at study baseline predicted less improvement of cognitive composite score at week 6 endpoint for all treatment groups, compared to those with low to medium wr-CRP levels (< 5 mg/L). The joint effect of wr-CRP (log) and HDL or HOMA-IR on moderating procognitive effects of lurasidone was significant (P<0.05), with greater lurasidone (vs. placebo) effect size in patients with either low wr-CRP and high HDL concentration or lower levels of both wr-CRP and HOMA-IR. Lurasidone treatment was associated with significant reduction in symptom severity as assessed by PANSS, CGI-S, and MADRS change scores from baseline to week 6, independent of wr-CRP, HDL and HOMA-IR levels at study baseline. Lurasidone had no significant effect on change in wr-CRP level from baseline to week 6 endpoint.

No. 130

Treatment Patterns in Schizophrenia Patients Initiated on Paliperidone Palmitate Long-Acting

Injectable in a Medicaid Population
Poster Presenter: Antoine C. El Khoury
Co-Authors: Kruti Joshi, Matthew Brouillette, Aswin Kalyanaraman

SUMMARY:
Objective: Compare adherence and persistence between schizophrenia patients who initiated paliperidone palmitate once-monthly (PP1M) and those who transitioned to paliperidone palmitate every three months (PP3M) according to the label versus oral atypical antipsychotics (OAA).**Methods:** Adult schizophrenia patients initiating PP1M, transitioned to PP3M, or initiating OAA were identified within MarketScan Medicaid claims database between 01/01/2010–06/30/2016. Patients were continuously enrolled (CE) for 12-months prior to the index date (first PP1M, PP3M, or OAA claim) and followed for 12 months or until inpatient death, end of CE or study period. Adherence was measured using proportion of days covered (PDC). To calculate PDC, each day in the study period was evaluated as "covered" or "not covered" by a prescription. If all days were covered by a prescription of a specific medication, then PDC is 100% for that medication. The number and proportion of patients with PDC≥ 80% was also reported. Non-persistence was defined as the lack of subsequent claims for the index medication beyond 30, 60, or 90 days following the exhaustion of the previous claims days' supply. Univariate analyses for differences between PP1M vs. OAA and PP3M vs. OAA were conducted. Chi-square evaluated the statistical significance of differences in the distribution of categorical variables; two-sided t-tests were used for continuous covariates. **Results:** A total of 3,794 PP1M patients, 105 on-label PP3M patients, and 9,754 OAA patients were included (mean age 38 years for PP1M/PP3M and 41 years for OAA; 42% female for PP1M/PP3M and 53% female for OAA). Risperidone (31% PP1M/PP3M, 7% OAA), quetiapine (25% PP1M/PP3M, 6% OAA), and haloperidol (24% PP1M/PP3M, and 8% OAA) were the most common baseline schizophrenia-related medications. Post-index psychiatric polypharmacy was significantly lower for PP1M and on-label PP3M patients compared to OAA (48% and 31% vs. 52%, p<0.001 for both values). Adherence was significantly higher for PP1M and on-label PP3M patients compared to OAA patients (0.55 and 0.79 vs. 0.42, p<0.001 for both values) and the proportion of patients with PDC≥ 80% was also significantly higher for PP1M and on-label PP3M patients (32% and 66% vs. 21%, p<0.001 for both values). Non-persistence at 30 days (81% PP1M/36% PP3M vs. 86% OAA), 60 days (69% PP1M/25% PP3M vs. 79% OAA), and 90 days (21% PP1M/11% PP3M vs. 29% OAA) was significantly lower for PP1M and PP3M patients compared to OAA patients, p<0.001 for all values, respectively. **Conclusion:** Among Medicaid patients, PP1M and PP3M patients are associated with significantly higher adherence and persistence compared to OAA patients.

No. 131
Long-Term Outcomes After Acute Course of Electroconvulsive Therapy in Patients With Clozapine-Treatment Schizophrenia
Poster Presenter: In Won Chung
Co-Authors: Yong Sik Kim, Jinhyeok Jang, Tak Youn, Se Hyun Kim

SUMMARY:
Objective: This study is aimed to explore long-term outcomes after acute course of electroconvulsive therapy (ECT) augmenting to clozapine in patients with treatment-resistant schizophrenia. Methods: Patients with schizophrenia who were treated with clozapine for more than 12 weeks with a plasma level of greater than 350 ng/ml and acute course of ECT were selected and followed up for a pre-determined observation period of four years. After acute course of ECT, changes of psychotic symptoms and the need for additional ECT were investigated. Results: Among thirteen patients who were followed for an average of 665.2 (±440.1) days during pre-determined observation period, seven patients (53.8%) were treated with clozapine without further ECT during a mean observation period of 627.3 (± 417.1) days (105 ~ 1,225 days). Of the remaining six patients (46.2%) who were continued further ECT during a mean period of 709.5 (±503.5) days (122 ~ 1,353 days), three patients (23.1%) continued maintenance ECT at least once at intervals of up to 4 weeks together with clozapine treatment and the other three patients intermittently received acute courses of ECT or rescue ECTs whenever symptoms worsened. The need for additional ECT after acute

course of ECT was not associated with positive and negative symptom types, ECT parameters, PANSS total score, and clozapine dose and plasma levels during the observation period. Conclusions: After acute course of ECT, patients with clozapine-resistant schizophrenia could be divided into two groups: patients who need additional ECT and those who do not. Further study on large populations is necessary to identify predictors of the needs for maintenance ECT. This study has nothing to disclosure.

No. 132

The Relationship Between Insights Assessed by BIS and SUMD, and Depressive Factor and Cognitive Domain in PANSS

Poster Presenter: In Won Chung
Co-Authors: Yong Sik Kim, Jinhyeok Jang, Samuel Hwang, Tak Youn, Se Hyun Kim, Sangwon Park, Hee Yeon Jung, Nam Young Lee

SUMMARY:
Objective: The standardized measurements of insight into illness in patients with schizophrenia have proliferated including both self-report and rater-rated scales but showed inconsistent and discrepant results, suggesting the intervening symptom factors such as depression and cognition. This study was aimed to compare between insights into illness assessed by self-report scale and by rater-rated scale and also to investigate the relationships among insights into illness, depression, and cognition. Methods: Forty-eight patients with schizophrenia according to DSM-5 criteria who were recruited from the inpatient psychiatric wards and outpatient clinic of the university hospital were assessed by abbreviated version of the Scale to Assessment Unawareness of Mental Disorder (Ab-SUMD) and Birchwood Insight Scale (BIS) for insight into illness, and Positive and Negative Syndrome Scale (PANSS) for psychotic symptoms. The subscale syndrome factors, depressive factor (PANSS-Dep), and cognitive domain (PANSS-Cog) were extracted from PANSS. Results: In the correlation between factors within each scale, only the correlation between Awareness of illness and Need for treatment showed r=.474 in BIS, but a high correlation between all factors from r= 513 to .935 showed in Ab-SUMD. There were statistically significant negative correlations between BIS and Ab-SUMD factors except for the relationship between Symptom attribution of BIS and Awareness of negative symptoms of Ab-SUMD. PANSS-Dep showed no significant correlation with BIS, Ab-SUMD, and PANSS-Cog, respectively. However, PANSS-Cog showed significant correlation with all factors of Ab-SUMD from r=.614 to .455 and with total score of BIS at r=-.455. PANSS-G12 showed significant correlations with factors of Ab-SUMD and BIS greater than r=.556 except Symptom attribution of BIS at r=-.491. In analysis with PANSS factors of Kay's (positive, negative, general psychopathology) and Hwang's (positive, negative, activation, autistic preoccupation and anxiety/depression), Awareness of symptom and Symptom attribution of BIS showed no correlation with any factors of PANSS of Kay's and Hwang's at $p < 0.01$. Positive factors of PANSS showed significant correlation with factors and total score of Ab-SUMD but not with those of BIS. Negative factors of PANSS showed significant correlation with all factors and total score of Ab-SUMD and Need for treatment and total score of BIS. Anxiety/depression factor of Hwang's showed no correlation with any factors of BIS and Ab-SUMD except Need for treatment factor of BIS (r=.341) and Awareness of disease factor of Ab-SUMD (r=.309). Conclusions: Cognitive domain and negative symptoms seem to have significant effects on all domains of insight into illness assessed by BIS and Ab-SUMD but positive symptoms and anxiety/depression do not. This study has nothing to disclosure.

No. 133

Long-Acting Injectable Antipsychotics With Three-Month Formulation in Schizophrenia and Other Psychotic Disorders: Effectiveness and Satisfaction

Poster Presenter: Ana-Isabel De Santiago-Díaz
Co-Author: Lucía Sánchez-Blanco

SUMMARY:
BACKGROUND: Uninterrupted long-term therapy is essential for controlling symptoms and preventing relapse in psychotic illness. Long-acting injectable (LAI) antipsychotics can improve treatment convenience and reduce non-adherence in these patients2. OBJECTIVES: The aim of this study was to compare 3-monthly formulation of intramuscular

paliperidone palmitate (PP3M) versus 1-month paliperidone palmitate (PP1M) concerning the control of symptoms, prevention of relapse and satisfaction in schizophrenia and other psychotic disorders. METHODS: This prospective cohort study is being conducted in Santander (Spain) and recruited 25 consecutive outpatients from Hospital Valdecilla (aged 48,88; 72% males), meeting DSM-IV-R criteria for Schizophrenia, schizoaffective disorder or other Psychotic Disorders, clinically stable who were receiving PP1M (mean: 23,36 months; range 4-63) and switched to PP3M. To check the symptomatology changes the Brief Psychiatric Rating Scale (BPRS-18; score 0-6)3 was assessed before and after the PP3M switch (1, 3, 6, 9 and 12 months). Second outcome measure was the change in patient and carer satisfaction measured by a visual analogue scale (0-10) between the baseline and six months. For statistical analysis SPSS-22 was used. RESULTS: Often PP3M was monotherapy antipsychotic (56%) and only 12% of patients needed a bundled anticholinergic agent. Overall BPRS score at baseline was 28,24 (18-39). Measurable decrease in the mean Point-Score BPRS was found after switching to PP3M at all following-checks: 24,04 (-4,2) at 4 weeks; 21,75 (-6,49) at 12 weeks and 20,73 (-7,55) at six-months, including both negative (7,20 basal-score; 4,68 at 6 months) and possitive (7,28 basal-score; 5,27 at 6 months) clusters. Clinical stability continued was monitored on the follow-up: 20,2 at 9 months and 19,2 at 12 months (5 cases). Average score of PP1M satisfaction was 7,76 (patients) and 7,95 (carers) with a clear increase in PP3M satisfaction at 6-months for patients (9,22) more than carers (9). CONCLUSIONS: Regardless the small N and the methods used, our findings suggest that 3-monthly paliperidone palmitate was similar or better than the 1-month formulation to control the symptoms and relapse-free in psychotic patients. Besides, the improvement on satisfaction with 3-months formulation, in both patient and carer already satisfied with 1-monthly-paliperidone-palmitate, has been reported. Further follow-up studies will be needed to establish the evidence.

No. 134

Effects of Transcranial Stimulation on Cognitive Function and Brain Functional Changes in Schizophrenia

Poster Presenter: Robert C. Smith, M.D., Ph.D.
Co-Authors: Wei Li, John M. Davis, M.D., Chunbo Li

SUMMARY:
Background: Cognitive deficits are persistent in chronic schizophrenia (CSZ). In a U.S. sample we showed that 5 sessions of active tDCS compared to sham significantly improve cognitive faction in CSZ measured by MATRICS cognitive battery (MCCB), but the generalizability of these findings and relation to changes in brain function need to be further investigated. We report a double-blind study of 10 sessions of tDCS on cognition and brain avtivation changes in Chinese CSZ. Methods: 40 Chinese patients with CSZ were randomized to receive 10 sessions of active tDCS or sham tDCS over a two week period. Cognitive function was evaluated with a Chinese version of the MCCB, the Paced Auditory Serial Addition Task (PASAT) and subtests from the CogState. Psychiatric symptoms were evaluated with the PANNS. Changes in brain function were evaluated with an fMRI protocol at baseline and after 10 tDCS sessions for resting state changes in brain activation, and changes in activation in DLPFC during a 0 and 2 back working memory task. Results: There were no strong effects (P<.05) of Active vs Sham tDCS on cognition, but there were significant (P<.01) effects on differences in brain activation assessed by fMRI. On MCCB, there were trends (P=.06) for Active tDCS vs. Sham tDCS to improve Speed of Processing. There were no effects of active vs sham tDCS on psychiatric symptoms. There were significant differences between active vs sham tDCS on resting state activation in several brain areas including middle frontal gyrus, superior frontal gyrus and superior and inferior parietal gyrus; active tDCS increased and sham tDCS decreased activation. There were significant relationships between changes in several MCCB scores and changes in brain activation in specific areas. On the working memory task during fMRI in conjunction with this improvement in performance, task activation decreased in right middle frontal gyrus after 10 sessions of tDCS for the 0 back condition. A comparison of O back vs. 2 back task activation showed significant increased activation in bilateral middle frontal gyrus was evident after 10 sessions of active tDCS and not sham tDCS. Conclusions: tDCS had significant effects on resting state brain

activation which were significantly related to changes in MCCB. The behavioral and activation patterns in the middle frontal gyrus during the O back task suggest active tDCS produced to better performance with lower effort on the low-load 0 back task, closer to what we would expect in normals. The increased activation in the 2-back task suggests potential for increased cognitive reserve stimulated by tDCS. However, in this sample 10 sessions of active vs sham tDCS did not show marked effects on overall cognitive function.

No. 135

Obstructive Sleep Apnea in Hospitalized Psychiatric Patients

Poster Presenter: Maria Tanielian, M.D.
Co-Author: Karl Doghramji, M.D.

SUMMARY:
Background: Obstructive sleep apnea (OSA) is a prevalent co-morbidity in mental illness. The aim of this study was to find the risk and predictors of sleep apnea in hospitalized psychiatric patients. Methods: 91 consecutive psychiatric inpatients, 59.3% males, were administered the STOP-BANG and Epworth Sleepiness Scale (ESS) questionnaires. The average age of the patients was 43.25 (SD: 17.69). 53.8% were black, 38.5% were Caucasian, and 7.7% belonged to other ethnic groups (Indian, East Asian, Hispanic and unknown). Diagnostic and Statistical Manual of Mental Disorders 5th edition (DSM-5) diagnostic criteria were utilized for admission diagnoses. Neck circumference and BMI of the patients were measured. Medical and demographic information about the patients were gathered from patients' hospital charts. To increase the specificity of the inventory in psychiatric inpatients, the SOP-BANG, was utilized, which excludes the tiredness factor of the STOP-BANG inventory, as a measure of OSA risk. The significant predictors of high sleep apnea risk were identified using stepwise linear regression analysis. Gender, Age and BMI were not included as potential predictors in the linear regression model because they were part of the risk assessment questionnaire. Results: 48.4% (44 patients) screened positive for high risk of OSA. Of patients who were above 50 years old, 62.5% fell into the high risk category. Conversely, 40.7% of patients who were 50 years old or below screened positive for high risk of OSA. 29.7% (27 patients) screened positive for excessive daytime sleepiness. The predictors of high SOP-BANG score were use of mood-stabilizers (P=0.043), use of CNS depressants (P=0.043), and excessive daytime sleepiness measured by ESS (P=0.032). Conclusion: The risk of OSA was high in psychiatric inpatients, and particularly elevated in older patients and those taking commonly utilized psychiatric medications. Given the negative effects of OSA on psychiatric and medical morbidity, these data suggest that OSA screening should be considered in psychiatric inpatients.

No. 136

Insomnia Severity, Prevalence, Predictors, and Rate of Identification in a Sample of Hospitalized Psychiatric Patients

Poster Presenter: Karl Doghramji, M.D.
Co-Authors: Maria Tanielian, M.D., Kenneth Michael Certa, M.D., Tingting Zhan

SUMMARY:
Background: Insomnia is a major health risk in psychiatric settings. Untreated insomnia is a risk factor for new onset, exacerbation, and relapse of mental illness. However, insomnia has not been well studied in psychiatric inpatients. The goal of this study was to examine the prevalence, severity and predictors of insomnia in hospitalized psychiatric patients. Methods: 97 consecutive psychiatric inpatients were administered the Insomnia Severity Index (ISI) to evaluate the presence and severity of insomnia. Diagnostic and Statistical Manual of Mental Disorders 5th edition (DSM-5) diagnostic criteria were utilized for admission diagnoses. Additional data including medical and demographic information were gathered both by individual interviews and from patients' hospital charts. To identify the predictors of insomnia severity, the endpoint ISI was analyzed using multivariate linear regression model with backward stepwise variable selection by AIC (Akaike Information Criterion) and was validated by 100 bootstrap copies. Results: 79.4% of the patients reached threshold criteria for insomnia as measured by Insomnia Severity Index; 21.6% had mild insomnia, 30% had moderate clinical insomnia and 27.8% had severe clinical insomnia. All three insomnia complaints, sleep onset insomnia

(89.7%), sleep maintenance insomnia (82.4%) and early morning awakening (73.2%) were highly prevalent in this inpatient population. Levels of dissatisfaction (56.7%) with, and worry/distress (79.4%) regarding sleep problem were also high. The majority of patients indicated concern that their sleep problem was noticeable to others (79.4%) and that their sleep problem interfered with their daily functioning (85.6%). Although insomnia as a symptom was occasionally noted in the intake evaluation notes, none of the clinical records contained the term insomnia within the active problem list and none of the patients received a diagnosis of insomnia disorder. The significant predictors of insomnia severity were age (P=0.009), recent suicide attempt or ideation (P<0.001), tobacco use (p=0.024) and drug abuse during the past month (P=0.040). Conclusion:This study indicates that a majority of psychiatric inpatients suffer from insomnia, of moderate to severe proportions. It also suggests that insomnia may not be adequately identified, and may not be regarded as an independent clinical entity, in inpatient settings. Factors other than psychiatric diagnosis are predictors of insomnia severity in the inpatient setting, including older age, recent suicide attempt or ideation, tobacco use, and illicit drug use in the past month. Future studies with larger sample size could identify more insomnia severity predictors in this population. Understanding the prevalence and predictors of insomnia in psychiatric inpatients may offer clues into its proper management.

No. 137

Cognitive Behavior Therapy for Insomnia in Military Deployed Operational Setting Utilizing Enlisted Combat Medics: An Innovative QI/PI Project

Poster Presenter: Brooke Wirtz
Co-Author: Rohul Amin, M.D.

SUMMARY:

Background: The authors experienced challenges treating insomnia in a deployed military population due to lack of personnel. A process improvement project was undertaken to develop CBT-insomnia protocol that was taught to enlisted Combat Medics. Method: We planned the project using Plan, Do, Study, Act (PDSA) cycle following a non-research determination by Institution Review Board. Combat Medics were trained in the checklist based approach. Results: A total of 25 patients underwent the treatment prior to redeployment of the military unit from Middle East. Outcomes measures (Learner's Training Evaluation, Sleep Efficiency, Time Asleep, Total Time in Bed, and Perceived Sleep Satisfaction) were calculated for Intake (Session 1), Session 2 and Session 3, with total of 15 patients having data for all three touch-points. Using Wilcoxon Signed-Ranks Test, the pre- versus post-training perceived skill ($z = -2.871$; $p<0.01$) and confidence ($z = -2.844$; $p<0.01$) levels to treat insomnia significantly improved. A non-parametric Friedman's test of differences among repeated measures for sleep efficiency was conducted and rendered a χ^2 value of 19.54 which was significant ($P<0.01$). Post-hoc Wilcoxon Signed-Ranks Test with Bonferroni correction indicated that post-test ranks were statistically significantly higher for Session 2 ($z = -3.68$; $P<0.01$) and Session 3 ($z = -3.11$; $p<0.002$) at follow-up when compared to Session 1. For total time in bed, A post-hoc Wilcoxon Signed-Ranks Test with Bonferroni correction indicated that post-test ranks were statistically significantly lower for Session 2 ($z = -3.43$; $P<0.01$) and Session 3 ($z = -2.68$; $p<0.007$) in comparison to baseline intake values (Session 1). The change in ranks was non-significant between Session 2 and Session 3, ($z = -1.59$; $p = 0.11$). For Time Asleep, non-parametric Friedman's test of differences among repeated measures for self-reported sleep duration was conducted and rendered a χ^2 value of 3.268 which was non-significant ($P = 0.195$). For Total Time in Bed, A post-hoc Wilcoxon Signed-Ranks Test with Bonferroni correction indicated that post-test ranks were statistically significantly lower for Session 2 ($z = -3.43$; $P<0.01$) and Session 3 ($z = -2.68$; $p<0.007$) in comparison to baseline intake values (Session 1). The change in ranks was non-significant between Session 2 and Session 3, ($z = -1.59$; $p = 0.11$). For Perceived Sleep Satisfaction, A post-hoc Wilcoxon Signed-Ranks Test with Bonferroni correction indicated that post-test ranks were statistically significantly higher for Session 2 ($z = -2.75$; $P<0.001$) and Session 3 ($z = -3.15$; $p<0.002$) follow-up in comparison to baseline. The change in ranks was also significant between Session 2 and Session 3, ($z = -3.05$; $p<0.002$). Conclusion: The process developed is a viable alternative to existing insomnia treatment,

overcoming manpower deficiencies to allow for effective delivery of care even in deployed setting.

No. 138

Psychiatric and Medical Comorbidities in a Veteran Population With Mild to Moderate Obstructive Sleep Apnea (OSA)

Poster Presenter: Antony Fernandez, M.D.
Co-Authors: Shekar Raman, Elsa Mathew, Leslee Hudgins

SUMMARY:

Obstructive sleep apnea (OSA) is characterized by partial or complete recurrent upper airway obstruction during sleep, resulting in periods of apnea, oxyhemoglobin desaturation, and frequent night awakenings with excessive daytime sleepiness as a consequence. OSA is associated with a plethora of comorbidities including hypertension, cardiovascular disease, coronary artery disease, obesity, depression, PTSD, and increased mortality. We sought to determine associated comorbidity in our sample of veterans with mild to moderate OSA and using MAD. Methods: A diagnosis of mild to moderate OSA was established by HST/PSG prior to referral. Between November 2016 and February 2017, 50 veterans received a Mandibular Advancement Device (MAD). Medical record review was performed on this sample and data elements were recorded in a de-identified manner prior to statistical analysis for associated medical comorbidities. The institutional review board granted a waiver of informed consent. Results: There were 50 patients in this sample, with a mean age of 50.9 ± 11.3 years. 76% of patients had mild OSA and 24% had moderate OSA. The mean pre-treatment apnea-hypopnea index was 11.0 ± 6.2. The body mass index was 31.4 ± 4.8. The prevalence of comorbidities was as follows: CHF/CAD (8%), HTN (36%), Asthma/COPD (6%), Stoke/TIA (6%), PTSD (42%), Other Psychiatric disorders (44%), TBI (4%), Obesity Class I & II (60%), Obesity Class III (4%). Conclusions: Current data supports OSA as an independent risk factor for the emergence of comorbidities. Our sample shows significant comorbidity even in mild to moderate OSA. To provide comprehensive treatment in this patient population, collaborating with primary care and specialty providers is essential. We must caution that our limited sample size does not let us determine a causal relationship between OSA and associated comorbidities. More research with a larger sample size is necessary for further investigations and correlations.

No. 139

Pain and Anxiety and Their Relationship With Medication Doses in the Intensive Care Unit

Poster Presenter: Sunyoung Park
Lead Author: Jin Young Park
Co-Authors: Jaesub Park, Kyungun Jhung, Seung-Taek Oh, Jooyoung Oh, San Lee

SUMMARY:

Background: Patients in the ICU are at risk of experiencing increased pain and anxiety because they might have a progressive disease and commonly undergo invasive therapies, which could have negative impacts on their general medical condition and treatment procedures, such as ventilator care. However, because of communication difficulties in ICU patients, pain and anxiety and their interaction in ICU patients have been understudied. The purpose of this study was to examine the effects of the pain and anxiety and their relationship to the dose of opioids and anxiolytics administered in ICU patients. Methods: The subjects included 1,349 conscious, critically ill patients admitted to an ICU in Gangnam Severance Hospital, Seoul, South Korea. Trained psychiatrists evaluated the patients daily for pain and anxiety. Data regarding the doses of opioids and benzodiazepines administered were gathered. Linear mixed model was used for analysis. Results: Significant correlation was found between pain and anxiety experienced by patients in the ICU ($p<0.001$). In regards to medication doses, pain had significant main effects on the dose of opioids administered ($p=0.011$). However, no significant effects of the anxiety on the daily dose of anxiolytics or opioids were detected. Conclusions: Due to the close relationship between pain and anxiety, the present study suggests the need for a precise evaluation and comprehensive approach to the management of pain and anxiety. This result implies that management of anxiety may affect pain reduction. Additionally, anxiety was apparently underestimated and undertreated in the ICU patients. This is one of the first studies to reveal the relationship between

anxiety and pain and their management using a systematic method in a large number of ICU patients. Acknowledgment: This research was supported by a grant of the Korea Health Technology R&D Project through the Korea Health Industry Development Institute (KHIDI), funded by the Ministry of Health & Welfare, Republic of Korea (grant number: HI16C0132).

No. 140

Transcranial Direct Current Stimulations Versus Sertraline for Depression in Korean: Multicenter, Randomized, Double Blind, Active Controlled Study

Poster Presenter: Sunyoung Park
Lead Author: Jin Young Park
Co-Authors: Se Joo Kim, Won-Jung Choi, Min-Kyeong Kim

SUMMARY:
Background: Transcranial direct current stimulation (tDCS) trials for major depressive disorder (MDD) have shown mixed results. We compared efficacy and safety of tDCS with sertraline (50mg/d) for the treatment of MDD in South Korean participants. Methods: In multi-center, double-blind, noninferiority trial involving adults with unipolar depression, we randomly assigned patients to receive tDCS plus oral placebo, and sham tDCS plus sertraline. The tDCS was administered in 30-minute, 2 mA prefrontal stimulation session for 10 consecutive week days, followed by 2 treatments at 4 and 6 weeks. Sertraline was given at a dose of 50mg per day for 6 weeks. The primary outcome measure was the change in the Montgomery-Asburg Depression Rating Scale score at six weeks (end point). Non-inferiority margin was established to be less than half of the difference between the effect of the placebo and those of sertraline on depression, based on the results of the existing antidepressant clinical trials. Results: A total 92 patients underwent randomization with 45 being assigned to tDCS, and 47 to sertraline group. The mean depression scores measured with the MADRS decreased by 14.58±8.51 points in the tDCS group and by 12.32±8.56 points in the sertraline group. Main effect of time was significant, in both groups (tDCS group, $p<0.001$; sertraline group, $p<0.001$). There were no significant main effect of group ($p=0.5877$), and time by group interaction across weeks 0, 3, and 6 ($p=0.1539$), but non-inferiority of tDCS to sertraline could not be claimed. Application site pain was most common adverse effect reported by participants, there were no significant group differences in rates of adverse events. No serious adverse events were reported. Conclusions: In the present study, both sertraline and tDCS were effective and safe, but non-inferiority of tDCS to sertraline for the treatment of depression did not found. Acknowledgment: The present study was supported by the National Research Foundation of Korea (NRF) grant, funded by the Ministry of Science, ICT and Future Planning (MSIP), Republic of Korea (No. 2016R1C1B2010739). This research was funded by Y brain (Pangyo, Republic of Korea), a startup company.

No. 141

Predictive Power of Resting State fMRI for Transcranial Magnetic Stimulation Response in Treatment Resistant Depression

Poster Presenter: Norman Charles Moore, M.D.
Co-Authors: Baris Metin, Kemal Mehmet Arikan, Nevzat Tarhan

SUMMARY:
Treatment resistant depression (TRD) is a common problem. Approximately one third of patients will not respond to trials of two different antidepressants. Current treatment options for treatment resistant depression include augmentation with antipsychotics and mood-stabilizers, psychotheraphy, transcranial magnetic stimulation (TMS), electroconvulsive therapy, vagus nerve stimulation and transcranial direct current stimulation. As there many options for resistant cases, finding the appropriate treatment method may be time consuming and costly. Recent studies showed that neuroimaging may offer prediction on which patient would benefit from which treatment. For instance, Drysdale et al. (2017) showed that resting state fmri identifies biotypes in treatment resistant depression that are indiscernible clinically. Furthermore patients with certain biotypes are more sensitive to TMS. In this study we will aim to present a replication of the study of Drysdale et al to ascertain the predictive power of the method and to evaluate the effectiveness at clinical settings. Patients with TRD, who did not respond to two different antidepressants at maximum dosage, will

be recruited and pre-TMS resting state fMRIs will be obtained. After standard TMS protocol for depression the changes in Beck Depression inventory scores will be evaluated and the predictive accuracy of resting state fMRI biotypes of the change in depression symptom scores will be calculated.

No. 142

An Innovative Pharmacological Protocol to Facilitate Court-Ordered Electroconvulsive Therapy (ECT) in Acutely Psychotic Patients

Poster Presenter: Yelena Semenova, D.O.
Co-Authors: Carolina Osorio, M.D., Melissa Pereau, M.D.

SUMMARY:
Electroconvulsive therapy (ECT) was first introduced in 1938. Currently, it is one of the most effective treatments for severe affective and psychotic disorders. Often, individuals suffering from these illnesses lack the capacity to provide informed consent for the procedure, thus prolonging the state of their condition. Longer duration of untreated conditions such as catatonia, mania, and psychosis significantly correlates with poor general symptomatic outcome, lesser likelihood of remission, decreased social functioning, and global outcomes. The balance of risks/benefits must be considered and often, the benefit of ECT outweighs the risk leading to the necessity of court-ordered treatment in the state of California. Acutely psychotic patients present a more challenging problem due to their hostile behavior and unwillingness to cooperate with treatment. We present a case of a patient with treatment-resistant catatonia and Schizoaffective disorder, depressed type who was successfully treated with court-ordered ECT. To facilitate the process of ECT treatment for this patient, we developed an innovative approach to the management of hostile behavior while avoiding medications which could alter the seizure threshold and limit the effect of ECT. In this case, the application of ECT was medically indicated, legally admissible and ethically appropriate in order to prevent the threat of serious damage to the patient's health.

No. 143

Body Temperature Rises With Improvement of Depression With ECT: Implication for Dysfunctional Thermoregulatory Pathways in Major Depression

Poster Presenter: Alexander Chen

SUMMARY:
Background: Patients with depression have been shown to have higher body temperatures and decreased ability to regulate their body temperature. Recent studies demonstrated possible efficacy in treating depression using whole body heat. We investigated the change in temperature in patients with depression before and after successful treatment with ECT with the hypothesis that body temperature will rise following improvement of depression. Methods: A retrospective chart analysis was conducted where electronic health records (EHR) of subjects diagnosed with depression (unipolar or bipolar) and treated with a full course of ECT were reviewed. 33 Subjects met the criteria for inclusion (Mean age 61±18, 20 males and 13 females). All subjects were hospitalized for recurrent, severe symptoms and were all naïve to previous ECT treatment. Each subject received multiple ECT treatments (9.7±2.9) until remission of symptoms, up to a full course of ECT. Oral temperature recordings pre- and post-ECT for the first ECT and the last ECT were collected for each subject. Statistical analysis was performed using paired t-test. Results: No significant change in mean body temperature occurred after the initial ECT treatment ($p=0.33$, mean body temperature change +0.094±0.55F), but a significant increase was found between the mean baseline body temperature and mean body temperature after the final ECT treatment when the depression had clinically improved ($p=0.009$, mean body temperature change +0.218±0.45F). All subjects achieved remission of depressive symptoms by the end of the ECT course and were deemed ready for discharge. Conclusion: Our data suggest that improvement in clinical depression appears to be associated with an increase in body temperature following successful ECT treatment. It may imply that body temperature regulation is diminished during an episode of depression and returns to normal [i.e. increases] following effective antidepressant treatment like ECT. It is noteworthy that the temperature was not significantly elevated from baseline following the first ECT-induced seizure, when efficacy has not yet

occurred, but it did increase significantly after the full course of about 10 ECT treatments had been administered, with remission of the depressive symptoms. Efficacy appeared to be associated with restoration of thermoregulatory mechanisms that could be disrupted during depression. Replication of these findings with larger samples and stricter parameters is warranted.

No. 144

The Characterization of Psychopathologies and Functioning Impairment, and an Assessment of Mental Health Needs for Adolescents Living in Staten Island

Poster Presenter: Peng Pang, M.D.
Lead Author: Jane Park
Co-Author: Timothy Bernard Sullivan, M.D.

SUMMARY:
Background: According to the New York City (NYC) Health Profile 2000, the rate of psychiatric hospitalizations for children aged 0-9 was 80/100,000 for Staten Island (SI) and 67/100,000 for the rest of NYC, and for adolescents aged 10-17, rates were 531/100,000 and 367/100,000 respectively. These statistics clearly show the disproportionate amount of mental health disorders found within the child and adolescent community in SI. Due to the high prevalence of psychiatric issues in this population, we carried out the first clinical information review of child and adolescent patients referred to the emergency department (ED) at Staten Island University Hospital (SIUH) for psychiatric evaluation with the goals: (1) to characterize common psychopathologies and associated impairment of functioning, and (2) to identify associated psychosocial and geographic factors. Methods: A chart review was performed on patients aged 0-18 referred by schools, clinics, parents, group homes or social agencies to the SIUH ED for mental health evaluation from May 1, 2016 to October 31, 2017. Results: 135 patient charts were analyzed. Of those evaluated, 36.2% of patients were admitted to the psychiatric service. The chief complaints that brought patients to the ED were 46.7% suicidal attempts, 17% depression, 15.5% aggression,12.6% anxiety, 8.2% medication noncompliance, 6.7% anger, 4.4% substance abuse, 4.4% running away, 3.0% suicidal ideations and 2.2% alcohol intoxication, 4.4% other. Results for suicidal history showed 30.4% reported a single or multiple prior suicidal attempt(s), and 17.8% had prior suicidal ideations. Out of the patients who had a suicidal attempt, 60.5% had 1 attempt, 23.7% had 2 attempts, and 15.8% had >2 attempts. In regard to self-harm and substance use, 26.5% reported self-harm and 30.3% reported using substances. The most common ED diagnosis' at discharge were 25.2% major depression, 20.7% oppositional defiant disorder, 17.8% adjustment disorder, 14.8% ADHD, 14.8% substance abuse, 11.1 % anxiety, 7.4% mood disorder, 5.9% bipolar disorder, 4.4% conduct disorder, 4.4% post-traumatic stress disorder and 3.7% impulse control disorder. In regard to educational needs, 28.9% of patients had an individualized education plan. Demographically, 95% of patients lived within a 5-mile radius of SIUH; the mean age was 14.49±2.88; the male to female ratio was 37% to 63%; the ethnic profile included 47.3% Cau

No. 145

Characterization of Psychopathology in Left-Behind Children in Central China: The First Chart-Review Study of Child and Adolescent Inpatient Service

Poster Presenter: Peng Pang, M.D.
Lead Author: Zhang Huiying
Co-Authors: Shao Xinyue, Li Shilong, Zhang Shuai, Guo Ping, Guo Hua

SUMMARY:
Background: Recent epidemiological studies of middle school students in central China, where there is a major left-behind children population, have revealed a high prevalence of behavioral issues, including psychosomatic complaints, poor attention, social withdrawal, truancy and aggression. Zhumadian psychiatric hospital is the only tertiary psychiatric center in the region and serves the local two million child and adolescent population, of which over 50% are left-behind children. This is the first clinical information review of adolescent patients who were referred to inpatient services. This study aims to (1) describe psychosocial information and clinical characteristics of patients aged 0-18 years; (2) explore correlations between patients' clinical-function impairments and developmental-social risk factors, so as to inform

and conduct future assessments of causal effects and to design targeted and effective interventions. Methods: The study was a chart review of admitted adolescents who were referred by clinics, parents, and schools during January - October 2017. Based on raising environment and parent-child interaction, child patients were categorized into four groups: Group 1--raised by grandparents before school age, 0 to 5-years, then alternatively by grandparents and parents after school age, Group 2--raised by both parents, Group 3--raised by single parent only, and Group 4--raised by grandparents only. Results: A total of 95 child and adolescent inpatient charts were reviewed. The patients' mean age were 14.7±2.0 years old. The patient numbers indicated in each group are G1= 9, G2=39, G3=22, and G4=25, respectively. Caregiver educational levels showed statistically significant group differences in that illiteracy or primary-school education were seen in 60% caregivers of G4, 59% of G3; 31% of G2, and 11% of G1, P<0.01. The rates of positive family psychiatric history were statistically significant in those who were raised in G3 households 27.3%, G4 24.0%, G2 7.7%, and G1 11.1%, respectively, P=0.02. Psychopathologies were characterized using symptomologies due to inconsistency in clinical diagnosis in China. Prevalence of suicide attempt 5%, suicidal ideation 8%, inattention 26%, anxiety 34%, depression 36%, mood dysregulation 33%, anger outburst 28%, paranoid delusion 38%, hallucinations 43%, aggression/violence 4%, social isolation 43%, low motivation 43%, school drop-out 20%, and poor hygiene 8%. There were no significant group differences in majority of psychopathologies, except in the following three symptoms/functioning impairment: inattention among the four groups, P=0.03. paranoid delusions, G4 56%, G3 55%, G1 33%, G2 33%, P<0.01; as well as school drop-outs G4 32%, G3 36%, G1 22%, and G2 3%, P=0.01, respectively. Conclusion: Inpatient adolescents, who displayed more inattention, anxiety, mood dysregulation, paranoid ideations, and higher school drop-outs, may correlate with their having poor social support and guidance,

No. 146

A Case of Recent Student Suicide and Step-Wise Implementation of Suicide Postvention Measures in a High School and Its Community

Poster Presenter: Peng Pang, M.D.
Co-Authors: Man Si Mabel Lou, Christine Hoang, M.D., Vivek Jain, M.D., Alyssa Stram, Timothy Bernard Sullivan, M.D.

SUMMARY:
In order to increase access to mental health care for adolescents, we have established two mental health clinics in local public high schools in Staten Island in September 2016. The schools are located in mixed socioeconomic neighborhoods with newly relocated immigrant populations. Students are exposed to illegal drugs and bullying, are often working, and have low interest in learning. Our case study describes a completed suicide by a student in one of these local high schools which occurred in October 2017, and how complex predisposing and precipitating risk factors as well as disconnection with the healthcare system contributed to the complexity of this tragedy. Our study focuses on an 11th grader who was referred to our service by her school counselor due to decreased academic performance and self-inflicted cutting behaviors in May 2017; she was diagnosed with major depressive disorder. She had multiple predisposing risk factors including a history of an undiagnosed learning disability, possible untreated attention deficit disorder, being a member of an immigrant family with low socioeconomic status, child and parental conflicts with weak family support, exposure to domestic violence, feelings of distrust and disconnection with her school counselors, recreational drugs use, poor sleep, self-cutting behaviors, low self-esteem and low motivation to make changes. Her precipitating risk factors for committing suicide included being raped weeks prior to the suicide, internet- and peer shaming following local media coverage of the rape, recent termination of two romantic relationships, and having difficulty engaging in treatment including noncompliance with medication. Inadequacies and barriers in the mental health infrastructure contributed to miscommunication and inability to provide needed psychiatric treatment to our patient. For example, although we recommended a long-term hospitalization to a pediatric psychiatric institution after the patient's second suicide attempt, she was discharged 10 days after being transferred to another hospital which has inpatient adolescent

psychiatric service. The patient eventually ended her life by hanging herself at home three weeks after her second attempt. Our poster aims to (1) analyze the various risk factors contributing to the patient's death and missed steps during the care we provided that could have prevented this tragedy, (2) describe challenges that arise from a lack of mental health resources in the Staten Island community that make it difficult to carry out post-vention strategies according to the National Guidelines for "Responding to grief, trauma, and distress after a suicide", and (3) share strategies to approach and resolve issues that stand in the way of providing outreach treatment and post-vention in school communities.

No. 147

The Outcome and Benefit of Suicide Postvention Workshops in High School

Poster Presenter: Peng Pang, M.D.
Co-Authors: Vivek Jain, M.D., Alyssa Stram, Christine Hoang, M.D., Jane Park, Jeannine Brooks

SUMMARY:

Background: Suicide is the second leading cause of death in adolescents over 14 years old. Since September 2016, Staten Island University Hospital psychiatric and pediatric clinicians have provided mental health care at two local high school clinics. Tragically, a female student seen by our service completed suicide. To reduce future suicide risk, we worked closely with school administration and personnel and conducted two workshops on "Suicide prevention and mental health in adolescents"; one for parents one month post-suicide, and the other for school guidance counselors and social workers six-week post-suicide. The goals of the workshops were (1) to help school personnel and parents identify risky behavior and warning signs, and to make timely referral to mental health services; (2) to assess the support needs in the community and in schools to design more effective and targeted suicide prevention measures. Methods: The content of the workshops was adapted from materials developed by the National Association of Suicide Prevention. Pre- and post-surveys were designed to: 1) understand adults' awareness on adolescent suicide, mental health issues and the availability of resources, 2) gauge workshop impact, and 3) solicit feedback on educational initiatives. Results: 39 parents participated in the workshop and completed pre- or post-surveys. Prior to the workshop, 75% of parents had no exposure to suicide prevention materials, none had attended suicide prevention workshops, 94% did not know mental health services were offered on campus, and 87.5% did not know the suicide prevention hotline phone number. Significant attitude changes were seen with the statements "people who really want to die will find a way; it won't help to try and stop them" (P=0.12), "you should not talk to depressed people about suicide; it might plant the seed in their minds" (P=0.16), and "people with both mental health and substance problems are at even greater risk of attempting suicide than those with either mental health or substance problems alone" (P=0.04). In regard to the guidance counselors and social workers, or the "gatekeepers", 11 guidance counselors and 4 social workers participated in the gatekeeper's workshop, all of whom had some form of prior suicide prevention education. 66% found that the workshop "increased my understanding of youth suicide and better prepared me to identify and refer at-risk students", and 75% "wanted more training in prevention of suicide or mental health problems in adolescents". Significant attitude changes were found with the statements "if someone is exposed to a suicide (family, friends, classmates), it increases their own risk for attempting suicide" (P=0.02), "people who really want to die will find a way; it won't help to try and stop them" (P=0.12), and "an adolescent who has a sexual identity conflict or is uncertain about their sexual identity is at greater risk for a suicide attempt" (P=0.13). Conclusion: Workshop attendan

No. 148

The Graphic Display of Quantitative Suicidality Data: S-Plots

Poster Presenter: Jennifer Giddens
Co-Author: David V. Sheehan, M.D., M.B.A.

SUMMARY:

Background: Regulatory agencies, pharmaceutical companies, clinical research organizations, data safety monitoring boards, medical directors of health care organizations, and medical safety

officers are challenged with the difficulty of summarizing the suicidality status of patients under their care in a simple, clear manner. Currently, data collected using a dimensional scale are reduced to the categorical system at the completion of a study. Suicidality data is currently organized and reviewed in complex tables, reflecting these categories, with a resultant loss of sensitivity and the risk of delayed detection, or of detection errors. Linking such data to study stopping rules is a complex multistep series of tasks, fraught with potential errors. In the interest of reducing error, speeding detection, protection of patients, clarity of data presentation and display, there is a need for a more efficient, clear, and simple system to display suicidality data. Methods: We explored and reviewed graphic displays of quantitative data in other medical and scientific disciplines to find suitable models. The selection criteria included simplicity, clarity, the ease of interpretation of the data, and how appropriate the displays would be for suicidality data, collected using a dimensional suicidality tracking scale. We applied a variety of graphic displays to a prospectively collected dataset using the Sheehan-Suicidality Tracking Scale (S-STS). The final displays are the result of this iterative process. Results: Suicidality-Plots (S-Plots) display the data for groups of patients and for individual patients over time. Interpretation of these S-Plots can quickly identify patients at higher risk, and provide a method to monitor the status of patients within a large sample over time. Interpretation of S-Plots can quickly identify the overall status of suicidality in the study over time in relation to the study stopping rules. Graphic display of quantitative suicidality data can be used to quickly visually identify individual patients at high risk, the disposition of all patients in a healthcare setting or clinical trial, and whether a clinical trial should be halted because of treatment-emergent suicidality. These S-Plots are customizable for the needs of different clinical trials and settings. A computer-generated version of these S-Plots is available. It can also generate e-mails or phone alerts to site investigators and sponsors for subjects deemed at imminent risk, and who need immediate attention. Conclusions: Use of S-Plots may reduce the potential medico-legal hazards from either the delayed analysis or delayed detection of suicidality in safety data, and the risk to patients in research trials and clinical settings.

No. 149

Is Obesity and High BMI a Risk Factor for Suicidal Ideation and Behavior in Adult Psychiatric Patients?

Poster Presenter: Ahmad Hameed, M.D.

SUMMARY:

Introduction: Obesity and suicide are significant public health issues that have been increasing in prevalence in recent years. Several epidemiological studies suggest an inverse relationship between body mass index (BMI) and completed suicide, and between BMI and attempted suicide. However, others have found an increased risk of suicide attempt among those with high BMI. Few studies have examined BMI and suicidal ideation. Additionally, few studies have examined whether high BMI is a risk factor for suicidality in psychiatric inpatients or have used a standardized suicide assessment. In the current study, we compared scores on a standardized suicide assessment between psychiatric inpatients of different BMI groups. Methods: Patients (n = 199) completed the Sheehan Suicidality Tracking Scale (S-STS), a standardized suicide assessment which inquires about suicidal ideation and behavior which occurred in the past month. Patient height and weight were recorded by a nurse at admission and retrieved from the electronic medical record. BMI was calculated. Patients were classified as underweight, normal weight, overweight, or obese according to the Centers for Disease Control and Prevention (CDC) guidelines. We ran one-way ANOVAs to test for differences in score on the S-STS subscales (suicidal ideation, suicidal behavior) and in total score on the S-STS between the BMI groups. Results: Admission height and weight were able to be retrieved from the electronic medical records of 87% of the sample (n = 174). Four percent of patients (n = 7) were underweight, 27% (n = 47) were of a normal weight, about 28% (n = 49) were overweight, and about 41% (n = 71) were obese. One-way ANOVAs revealed that the BMI groups differed on the S-STS suicidal ideation subscale score ($F(3,173) = 5.68$, $p = 0.001$) and on the total S-STS suicidality score ($F(3,173) = 4.67$, $p = 0.004$). The BMI groups did not differ on the S-STS suicidal behavior subscale score ($F(3,173) =$

1.35, p = 0.26). In order to examine differences between the BMI groups, we ran Tukey's HSD test. Obese individuals scored significantly higher than overweight individuals on the suicidal ideation subscale (p<0.001) and the total suicidality score (p = 0.002). No other significant between-group differences emerged. Discussion: Contrary to our prediction, we did not find that higher BMI was associated with lower score on the S-STS and the S-STS subscales. However, Wagner et al (2013) found that extremely obese individuals had significantly higher odds of suicide risk behavior and suicide attempt than those of a normal weight. The risk for suicidal ideation and behavior may be increased at both extremes of the BMI spectrum. Clinicians should emphasize the importance of maintaining a healthy body weight when treating the patient at risk for suicidal ideation and behavior.

No. 150

Can Behavioral Health Data Improve Risk Prediction for Conditions Subject to Penalties Under the Hospital Readmissions Reduction Program?

Poster Presenter: Kristina Greenwood
Co-Authors: Joyce LaMori, Besa Smith, Dilesh Doshi, Cecile Davis

SUMMARY:
Background: The objective of this observational study was to evaluate the performance of a risk report/model utilizing health system electronic medical record (EMR) data to predict all-cause readmission rates for adult inpatients treated for acute medical conditions. The study focused on medical conditions and procedures subject to penalties under the CMS Hospital Readmissions Reduction Program (HRRP): acute myocardial infarction (AMI), heart failure (HF), chronic obstructive pulmonary disease (COPD), pneumonia (PN), coronary artery bypass grafts (CABG), and total hip/knee arthroplasty (THA/TKA). Given that behavioral health factors have been shown to influence readmission outcomes, this study examined whether the addition of behavioral health data can improve a risk prediction model for hospitalized patients. Methods: The study included 47,891 encounters for 39,155 unique adult patients admitted during 2015 to any of four acute care inpatient facilities within a non-profit community based healthcare system. Patients admitted to separate, primary psychiatric facilities were excluded. The risk model integrated a unique and comprehensive set of data elements including demographics, psychosocial characteristics, medical history, assessment results, and clinical events. Predictive models were constructed using multivariable logistic regression with a stepwise selection approach. All final models retained only statistically significant variables (p<0.05). Standardized coefficients were calculated to rank order variables allowing for the identification of indicators with the greatest impact to improve model fit. Results: A total of 6,986 unique study participants had one or more of the selected medical conditions/ procedures; mean age was 69.4 years, 50.2% were male. Approximately 29.3% of patients had one or more comorbid psychiatric conditions; depression, anxiety and substance use disorders were the most prevalent and 19.7% of patients met criteria for serious mental illness (SMI) based on the NAMI definition. For patients with any of the HRRP conditions, the presence of SMI increased the odds of 30-day readmission by 56% (OR=1.56, 95% CI=1.31-1.87) in an aggregate predictive model (C statistic = 0.714). Model calculations for each separate condition indicated SMI as the most influential behavioral health metric for COPD (OR=1.73, 95% CI=1.28-2.35) and HF (OR=1.66, 95% CI=1.18-2.32), while schizophrenia had the greatest impact for THA/TKA (OR=28.48, 95% CI=4.64-174.90). The C statistics for the separate condition models were: AMI=0.721, HF=0.635, COPD=0.655, PN=0.620, CABG=0.745, THA/TKA=0.522. Conclusion: As healthcare systems face increasing pressures to reduce readmissions and avoid HRRP penalties, results from this study emphasize the importance of including behavioral health related diagnostic indicators for all inpatient admissions. This study was supported by Janssen Scientific Affairs, LLC.

No. 151

Differences in Defense Mechanisms and Psychological Characteristics According to Suicide Attempt in Patients With Depression

Poster Presenter: Wan-Seok Seo
Lead Author: Bon-Hoon Koo
Co-Authors: Young-Ji Lee, WooSeok Choi, Musung Keum, Jae Hwa Choi

SUMMARY:

The aim of the present study was to identify the differences in defense mechanisms and psychological characteristics between depressed patients with and without suicide attempt. We recruited 250 depressed patients (67 with suicide attempts and 183 without suicide attempts) identified based on diagnostic criteria of the Diagnostic and Statistical Manual of Mental Disorders-IV-Text Revision. We compared clinical and psychological characteristics between two groups using the Symptom Checklist-90-Revised (SCL-90-R), the Minnesota Multiphasic Personality Inventory-2 (MMPI-2), the Personality Disorder Questionnaire-4+ (PDQ-4+), and the Defense Style Questionnaire (DSQ). The patients with suicide attempt recorded higher scores in all subscale of the SCL-90-R except phobic anxiety, and on the Infrequency (F), Back Infrequency (F(B)), Hypochondriasis (Hs), Depression (D), Psychopathic deviate (Pd), Paranoia (Pa), Psychasthenia (Pt), Schizophrenia (Sc), Hypomania (Ma) scales of the MMPI than those with no suicide attempt. The patients with no suicide attempt recorded higher scores on the Correction (K), Superlative self-presentation (S) scales of the MMPI than those with suicide attempt. The incidence of paranoid, schizotypal, avoidant, dependent, depressive, and negativistic personality disorders, as assessed by the PDQ, increased in patients with suicide attempt. Maladaptive and image-distorting defense style, as assessed by the DSQ, and acting out and affiliation were greater in those with suicide attempt. It appears that depressed patients with suicide attempt experience more clinical symptoms, use primitive defense mechanisms and have characteristic problems. Thus, such features can be helpful in clinical practice to evaluate depressed patients with high risk of suicide attempt.

No. 152

Societal Disconnection as a Predictor for Severe Suicidal Ideation in Psychiatric Patients

Poster Presenter: Rachel Altman
Co-Authors: Paul J. Rosenfield, M.D., Tal Ginsburg, Igor I. Galynker, M.D., Ph.D., Mariah Hawes, M.A.

SUMMARY:

Background: Feeling disconnected from close social networks may be a predictor of severe suicidal ideation in psychiatric patients. This analysis aims to characterize the relationship between severity of suicidal ideation and feelings of connectedness to a support network and society. Methods: Participants between the ages of 18 to 65 were recruited from the outpatient psychiatric units at Mount Sinai Beth Israel and Mount Sinai St. Luke's. Study eligibility consisted of attending an intake with a clinician at one of the recruitment sites. Data was collected following the initial clinic intake, as well as at 1-month follow up. Participants completed the Visual Analogue Scale (VAS), Beck Scale for Suicide Ideation (BSS), and the Columbia Suicide Severity Rating-Scale (CSSR-S) during the initial assessment, and were re-administered the CSSRS at follow up. The VAS is a two-item scale that asks participants to rate their feelings of connectedness to (1) family/friends/support network and (2) society, while the BSS measures suicidal ideation severity within the past week. The CSSR-S is a semi-structured interview which evaluates the presence and severity of suicidal ideation, preparatory acts, non-suicidal self-injurious behavior, aborted attempts, interrupted attempts, and actual attempts. These CSSR-S variables are referred to jointly as Suicidal Thoughts and Behaviors (STB). Two types of correlations and t-tests were performed to identify the relationship between support network and society disconnectedness, and STB. Results: Spearman's non-parametric test showed that participants who reported feelings of disconnectedness from their support network (rs= -.133, p=.026) and society (rs= -.256, p= .000) had higher suicidal outcomes. A t-test showed that participants who made a suicide attempt had significantly lower scores on the VAS support network (t(368) = -2.541, p =.011) and society (t(368) = -3.369, p =.001) items than non-attempters. A Pearson Correlation between the VAS and BSS further confirmed an association between suicidal ideation and disconnection from one's support network (r= -.287, p <.001) and society (r=-.300, p<.001) at intake, and at follow up (r=-.248 p <.001; r=-.264, p<.001, respectively). Conclusion: Participants' VAS scores were negatively correlated with their suicidal ideation severity as measured by the CSSR-S and BSS. Moreover, participants

endorsing lifetime STB reported on average feeling more disconnected from their support network and society than those who never experienced STB. This study concludes that those who never attempted suicide but report feelings of disconnection from their support network and society are at higher risk for developing STB. Moreover, psychiatric patients who are disconnected from their support network and society are at higher risk for attempting suicide at some point in their life.

No. 153

Transition From Child and Adolescent Mental Health Services to Adult Services in Madrid, Spain—Crecer Study: Preliminary Results

Poster Presenter: Blanca Reneses
Co-Authors: Nuria Tur, Isabel Cruz Orduña, Almudena Escudero, Jeronimo Saiz-Ruiz, M.D., María Fuencisla Pando Velasco, Abigail Huertas Patón, Mayelin Rey Bruguera, Ana Moreno Perez

SUMMARY:
Adolescence is a critical period in the detection and treatment of many psychiatric disorders. Recent research suggests that a proportion close to 50% of patients experience a poor transition from child and adolescent mental health services (CAMHS) to adult mental health services (AMHS). Objective: To study the transition process quality from CAMHS to AMHS in Madrid and to characterize patients who make a complete transition process and those who are lost in this process. This study aims to replicate the TRACK study in the UK. Methods: Retrospective study of a cohort of individuals who reached the age of 18 in an 18-month period and received treatment at CAMHS in 6 General Hospitals in Madrid (Spain) without a medical discharge. Subjects were studied two years before transition and until 6 months after having received care at AMHS. Variables: socio-demographic, clinical and those related to the transition process. Four groups of subjects were analyzed: Group 1: patients who made an effective transition process. Group 2: patients who were transferred to AMHS by other services than CAMHS, Group 3: patients who were not transferred to AMHS but didn't have a clinical discharge at the CAMHS and Group 4: patients who continued in treatment at CAMHS after age of transition. Results: Sample: 571 subjects. Group 1: n=156 (27,3%), Group 2: n=57 (9,9%), Group 3: n=280 (49%) and Group 4: n=78 (13,6%). Patients who continue their treatment at CAMHS are more likely to have a diagnosis of neurodevelopmental, psychotic or bipolar disorder, to receive remedial education and to be male. Patients who had an effective transition were diagnosed as having eating disorders in greater proportion and received pharmacological treatment and day hospital care more frequently before transition. Patients with emotional disorders and without a diagnosis were more likely to drop out of treatment before transition. Conclusions: It is relevant to bear in mind the process of transition due to the expected difficulties in reaching AMHS and the likelihood of dropping out. CAMS tend to retain in treatment patients with neurodevelopmental, psychotic or bipolar disorders, delaying the transition to CAMHS.

No. 154

Factors Predicting High Lethality in Suicide Attempts

Poster Presenter: Blanca Reneses
Co-Authors: Germán Seara, Ángel Luis Del Rey Mejías, Lucia Gallego, Dolores Saiz-Gonzalez

SUMMARY:
Background: A high lethality of a suicide attempt has been identified as an important risk factor for future completed suicide. Thus, its accurate evaluation is determinant in order to provide both a correct treatment and prevention strategies. Lethality degree is usually considered in relation to three key dimensions: medical lethality, potential lethality of the method used, and severity of the objective circumstances of the attempt. There is evidence about a number of socio-demographic and clinical factors together with personal and/or familial history of suicide behavior that are associated to a high lethality degree of suicide. Methods: Retrospective and observational study. This study was done at the San Carlos University Hospital in Madrid (Spain) (catchment area of 580,000 inhabs) in a period of 10 years (2006-2016). Sample: 15,045 subjects received emergency psychiatric care and 1,518 of them received specific care for at least a suicide attempt. For individuals with more than one suicide attempt, an index event was determined (the intent with greater severity or the last one, in case of

several intents with similar severity). The sample was divided in two groups according to the potential lethality of the index attempt: a high lethality group and a low lethality group. A high lethality attempt was considered If at least one of the following circumstances occurred: intent method with hanging, firearm, jumping out or non pharmacologic poisoning; high or moderate degree of planning; low or moderate degree of rescue possibility; personal reaction of rejection to the failure of the attempt and/or a moderate to highest medical severity degree according to psychiatrist criterion. Study variables: socio-demographic, psychiatric diagnostic, attempt characteristics (method, planning, rescue possibility, reaction after the attempt, medical severity) and personal and familial antecedents. The source of information was the Psychiatric Emergency Record that includes a specific suicide risk assessment protocol. Results: according to bivariate analysis the following variables were associated with high attempt lethality: male sex, higher mean age, 65 or more years old, a greater number of previous attempts, familial history of suicide behavior, greater attendance of psychiatric emergency services, diagnostic of schizophrenia, schizotypal disorder or chronic delusional disorder, bipolar disorder and depressive disorder. A predictive model was developed by a binary regression logistic analysis to identify predictive factors of high lethality. These were: male sex, a greater number of previous attempts, familial history of suicide attempts and to be older than 65 years. Conclusions: Male sex, personal or familial history of suicide attempts and to be older than 65 years can be predictive factors of a higher lethality of suicide attempts.

No. 155

There's an App for That: Stakeholder-Driven Development of an iOS Application to Support Mental Health Crisis Management

Poster Presenter: Molly T. Finnerty, M.D.
Co-Author: Nicole Bermeo

SUMMARY:

Background: Effective crisis intervention is one of the core services that allow individuals with disabilities to live and work within the community. Strengthening and integrating crisis services with other behavioral health services reduces the risk of unnecessary coercive treatment from law enforcement, involuntary transports, and other restrictive actions by protective services that may negatively impact the individual's recovery trajectory. To support statewide crisis intervention, the New York State Office of Mental Health (NYSOMH) received a Transformation Transfer Initiative (TTI) grant to improve the clinical informatics infrastructure of crisis services statewide. The first objective of the initiative was to identify stakeholder priorities and prioritize key features of a crisis management application. Methods: The NYSOMH convened a development workgroup and held over twenty stakeholder input meetings with twelve different agencies/advisory groups to collect and prioritize key features of an electronic crisis management application. Stakeholders included consumers of mental health services, mobile crisis team leaders and front line staff, hospital and mental health clinic administrators, and managed care medical directors. The NYSOMH team synthesized this feedback and developed version 1 of an iOS mobile application. Key Findings: Consumers reinforced the need for recovery-oriented, community-based alternatives to law enforcement and emergency department crisis services. All stakeholder groups perceived a crisis application as a useful tool for improving the quality of crisis services. Recommendations and concerns from stakeholder sessions were prioritized and translated into key features for the development of an iOS mobile application. Prioritized programming components for version 1 included: (1) care plans: recovery-oriented safety plans available to all providers; (2) a brief clinical summary: succinct patient treatment and service history for medical, mental health, and substance use, formatted for a smart phone; (3) communication network: functions allowing front-line providers quick access to provider contact information (e.g. linking a mobile crisis team to a patient's treatment team); and (4) flags/alerts for providers: quality flags regarding a history of suicide attempts. Conclusions: Stakeholders view a secure, HIPAA-compliant iOS mobile application as a valuable tool for supporting consumers and providers during a mental health crisis. Stakeholders voiced actionable recommendations and concerns for the crisis application that could be addressed by programming developers. A pilot implementation of

the first release of the iOS application with mobile crisis staff is currently underway.

No. 156

EpxDepression: A Pilot Study for SMS-Based Mood and PHQ-9 Tracking in Medical Students

Poster Presenter: Arjav Shah
Co-Authors: William Tzeng, Jordan Feltes, Zoe Lu

SUMMARY:
Background: Medical students are at a higher risk than the general population for depression and suicidal ideation. Factors pervasive in the medical field, including high stress, burnout, and stigmatization of mental illness, contribute to both comorbidities. Unfortunately, medical schools have only recently started focusing on the stigma against mental illness, and in a recent meta-analysis, only 15% of students screening positive for depression sought psychiatric treatment. The aim of this study was to assess the utility of an SMS-based mobile health platform, EpxDepression, in monitoring depression in medical students and linking them to care. Methods: First year medical students (N=33) at the Washington University in St. Louis School of Medicine were enrolled into a pilot program for EpxDepression. Participants received daily mood prompts [rated 1(lowest) to 7(highest)] and monthly PHQ9s. Providers were alerted to low mood scores (1 or 2) or positive suicidal ideations (1+ on the self harm question of the PHQ9) and participants were linked directly through SMS with the National Suicide Prevention Lifeline. Due to the success of the pilot, a randomized control trial (length = 38 weeks; length of the first year curriculum) was started and is in progress with the new first year class. The trial group (N=22) was enrolled in the same EpxDepression module while the control (N=21) received only PHQ9 prompts every 12 weeks. Results: For the pilot study, over a 33-week period, we achieved a gross response rate (questions answered / total questions) of 72.5%. The average mood was 5.27 (SD=1.07) and stayed temporally stable. The PHQ9 responses, on the other hand, decreased during the summer and increased once the school year began. 15% of the participants generated mood/suicidality alerts, and resulted in 4 calls to either the Suicide Prevention Lifeline or the provider. Similarly, in the preliminary data from the RCT, the trial group shows a stable average mood of 5.13 (SD=1.13), but a temporally variable PHQ9 score. The gross response rate for the trial group was 84.9% and 22.7% of the cohort generated alerts. The control group, however, showed a lower gross response rate (61.9%), and 4.5% of the cohort generated alerts. Conclusion: Our data suggests that EpxDepression is a promising and novel platform for tracking potential depression in a population prone to both depression and suicidality. We were able to track mood and symptoms of depression with high temporal resolution to determine when exactly in the course of the curriculum medical students were at the highest risk of depression and suicidality. This information would help educators and administrators determine key times for interventions. Furthermore, the preliminary data from the RCT indicates that receiving consistent prompting about self mental health keeps overall engagement higher and also links at-risk students who would have otherwise gone unnoticed to mental health resources.

No. 157

#metooinmedicine: An Interactive Poster on Trauma-Informed Care, Social Media Disclosure, and Harassment

Poster Presenter: Serena M. Chang, M.D.
Co-Author: Robert Portley, M.D.

SUMMARY:
As social media has become more a more pervasive and permanent component of many people's lives, interest in how mental health can be understood in this digital space has grown as well. Most recently, the #metoo campaign generated more than 800,000 posts related to sexual assault experiences. This ability to be publically vulnerable and honest about traumatic experiences within a sense of anonymity and community simultaneous provide a unique opportunity to further examine the effects and implications for disclosure, as well as similarities to other mental health disclosures and discussions on social media. Methods: Literature review of peer-reviewed research on mental health and social media (Facebook, Twitter, Instagram, Reddit, Snapchat) will be summarized in the context of use of the medium to communicate, disclose, and establish community. Additionally, as the #metoo

movement is too recent for peer-reviewed research as of this submission, we will also utilize respected journalism coverage of the experience. Fortunately, many of these social media platforms are independently searchable, enabling review of the posts themselves as well as the responses. Results: Much of the prior research in this area has reviewed how users utilize social media to tell their story, ask for help, and offer support for others. However, the #metoo campaign was unique in scale, speed, and content, focusing on the experience of sexual assault. Analysis of unsupportive comments further informs about the stigma and vulnerability users experience, as well as why many may have been reluctant to participate despite the prevalence of the campaign. Conclusion: The unifying goal of studying mental health in social media is to understand how to better meet people with needs where they are, and connect them to help if necessary. Many who do not seek care through traditional channels still seek to connect and receive support through other means. As social media continues to be a more entrenched part of everyday life, it is imperative that we better understand how users experience it for informal treatment through disclosure, information seeking and community.

No. 158
WITHDRAWN

No. 159
Prazosin in Children and Adolescents With Posttraumatic Stress Disorder Who Have Nightmares: A Case Series
Poster Presenter: Adefolake Akinsanya, M.D.
Co-Authors: Florence V. Kimbo, M.D., Raman Marwaha, M.D.

SUMMARY:
Objectives: The aim of this retrospective chart review is to identify patients who have been prescribed prazosin for PTSD-related nightmares and review benefits and outcomes from the use of prazosin. Methods: A retrospective chart review was conducted by reviewing medical records on EPIC over the last 20 years in the child psychiatry departments' patient population. Information on age, sex, medication dosage, diagnosis, and outcome was gathered. Information gathered was limited to just one facility. Inclusion criteria include the following: patients between the ages of 0 and 18 years; diagnosis of PTSD; nightmares; and prescription of prazosin. There was no discrimination between race, sex, or socioeconomic status. Exclusion criteria included diagnosis of PTSD with no nightmares and no prescription of prazosin, as well as ages >18 years. Results: A total of 25 patient records were identified. Of this population, 22 patients showed significant improvement in frequency of nightmares with administration of prazosin, one patient did not follow up after initiation of prazosin, and two patients had no significant improvement and also reported side effect of sedation. Of the 22 patients with significant improvement, five of them also had improved irritability and two of them had return of nightmares after stopping prazosin use and improvement when prazosin was resumed. The dose administered ranged from a total of one to three milligrams daily, with either nighttime dosing or twice-a-day dosing. Conclusions: Nightmares associated with PTSD have considerable comorbidity. Currently, there are no US Food and Drug Administration-approved medications for treatment of nightmares associated with PTSD in children and adolescents. Our case series highlights that prazosin helps with pediatric PTSD-related nightmares. This positive outcome gives room for consideration of this medication in the treatment of children and adolescents with PTSD-related nightmares. Given that there are no RCTs in children, we recommend that RCTs be conducted to assess efficacy and safety of prazosin.

No. 160
Heart Rate Variability Associated With Posttraumatic Stress Disorder in Victims' Families of Sewol Ferry Disaster
Poster Presenter: Jeong-Ho Chae
Co-Author: Sang Min Lee

SUMMARY:
Posttraumatic stress disorder (PTSD), which is caused by a major traumatic event, has been associated with autonomic nervous function. However, there have been few explorations of measuring biological stress in the victims' family members who have been indirectly exposed to the disaster. Therefore, this longitudinal study examined

the heart rate variability (HRV) of the family members of victims of the Sewol ferry disaster. We recruited 112 family members of victims 18 months after the disaster. Sixty-seven participants were revisited at the 30 months postdisaster time point. HRV and psychiatric symptoms including PTSD, depression and anxiety were evaluated at each time point. Participants with PTSD had a higher low frequency to high frequency ratio (LF:HF ratio) than those without PTSD. In the logistic regression analysis, high LF:HF ratio at 18 months postdisaster was significantly associated with the PTSD diagnosis at 30 months postdisaster (OR = 3.83, 95% CI [1.17, 12.47], p = 0.026. These results suggest that disrupted autonomic nervous system functioning for longer than a year after trauma exposure contributes to predicting PTSD vulnerability. Our finding may contribute to understand neurophysiologic mechanisms underlying secondary traumatic stress. Future studies will be needed to clarify the interaction between autonomic regulation and trauma exposure.

No. 161

Treatment Outcomes of Veterans Accepted Into PTSD Clinic

Poster Presenter: Rebecca Melissa Arana, M.D.
Lead Author: Daniella David, M.D.
Co-Authors: Ashley Beattie, M.D., Giselle Brito, M.D., Rebecca Melissa Arana, M.D.

SUMMARY:

Background: About one third of soldiers who served in Iraq and Afghanistan suffer from PTSD, depression, and/or substance use problems, and are at risk for functional impairment, chronic symptoms and suicide (1). Research indicates that patients with PTSD who engage in Evidence-Based Therapies (EBTs) can experience substantial symptom reduction and improved quality of life (2). However, studies also show significant attrition from EBTs, and residual symptomatology after EBT completion (3). Few studies have assessed manualized interventions focused specifically on coping skills and their effects on PTSD symptomatology and functional impairment. Objective: In this study, we propose to examine factors contributing to outcomes of veterans diagnosed with PTSD who enroll in a specialized PTSD outpatient clinic (PCT). Specifically, a manualized intervention developed by the PTSD Clinical Team focusing on initial psychoeducation and coping skills (PTSD Recovery Group) will be assessed regarding its effect on PTSD symptoms, self-reported functioning and future EBT enrollment rate. Potential demographic, psychosocial, medical and psychiatric factors that may affect veterans' ability to enroll in EBTs before and/or after participation in the PTSD Recovery Groups will also be examined. Methods: This recently IRB-approved study is being conducted in the PCT at the Miami VAMC. All new patients accepted into PCT are informed of available treatment interventions during orientation. We will identify all patients who participate in PCT orientation between March 2017-March 2018 and conduct chart reviews focusing on the following variables: intervention selected, psychiatric and medical diagnoses, medication treatment, sociodemographic variables and self-report scales including the PTSD Symptom Checklist (PCL-5) (4) and the Inventory of Psychosocial Functioning (IPF) (5). We will identify all patients who participate in the PTSD Recovery Group and compare those individuals who completed versus those who did not complete the PTSD Recovery Group. Statistical analysis: Using a 2 x 2 mixed model ANOVA with the factors of group completion status (2 levels; completers vs. non-completers) and treatment phase (2 levels; pre- vs. post-treatment), patients who did vs. did not complete the PTSD Recovery Group will be compared in their pre- vs. post-treatment PCL-5 and IPF scores. A 2 x 2 chi-square analysis will be used to determine if group completion status (completers vs. non-completers) is associated with subsequent EBT enrollment (entry vs. no entry). Group differences in sociodemographic, psychiatric, and medical variables will be assessed using t-tests and chi-square tests. Logistic regression analysis will be used to develop predictive models for: 1) identifying patients who did complete vs. those who did not complete the PTSD Recovery Group; and 2) identifying patients who did enroll vs. those who did not enroll subsequently in an EBT. Results: To follow.

No. 162

Long-Term Priming, Institutional Integration, and Socioeconomic Status: An Intervention in Adult Attachment Theory

Poster Presenter: Alissa Ryckert

SUMMARY:
Adult attachment style is a multidimensional measure characterized by low or high avoidance and anxiety, leading to one of four attachment types (Hazan & Shaver, 1987). The transition period to college is more difficult for young adults who score high on avoidant or anxious measures of attachment (Lopez & Gormley, 2002). Recent research on adult attachment has shown the potential for long-term priming techniques as an effective intervention into varying aspects of well-being (Rowe & Carnelley, 2006). This research uses long-term priming as an intervention into academic success in college, which is defined as institutional integration. Socioeconomic status is positively correlated with academic success in college, and institutional integration has been shown to be an overall measure of well-being in college and a predictor of academic success in the future (Peterson 1993). For this reason, socioeconomic status is explored as a mediating variable. Participants participated in a six-week study during which they either received positive priming materials or neutral stimuli. The McArthur Scale of Subjective Social Status, The Experiences in Close Relationships - Revised - Adult Attachment Scale, and Tinto's Institutional Integration Scale were completed at the beginning and end of the experiment.

No. 163
Mindfully Embracing Nutritional Excellence: Psychiatrist "Weighing in" on Obesity Epidemics
Poster Presenter: Robert Barris
Co-Author: Varun Mohan

SUMMARY:
The widespread epidemic of obesity in today's culture is ever growing with life expectancy being reduced by an average of 7 years. It is therefore necessary for the physician to respond and tackle the issue head on. And Psychiatry should be weighing in. Obesity can result from eating disorders which can in fact be equated to a "substance use disorder" heading in DSM-V. Therefore, applying the Addiction model to obesity is valid. Obesity reduces life expectancy more significantly than smoking and the healthcare system needs to be putting a clearer focus on this epidemic by mindfully embracing nutritional excellence. Physician obesity is an increasing problem with the United States being the biggest culprit. Of 19,000 physicians tested, 40% were recorded as overweight and 23% as obese. Now, more than ever, it is of utmost important for the physician to embody the practice rather than inform on it. Offering information is necessary but is not enough. Physician mindfulness, stepping out of the box to heal thyself, so as not to be involved in the insanity of the system, serving unhealthy food at medical conferences, feeding patients fast food in the hospital while condemning the addiction of drug use, are all notions for the healthcare system to understand. More wealth leading to less nutrition. Suicide with a fork rather than an instrument. Psychiatrists must weigh in and mindfully embrace nutritional excellence to curb the obesity epidemic once and for all.

No. 164
"Vet-to-Vet" Diabetes Self-Management Education for Homeless Veterans With Severe Mental Illness and Type 2 Diabetes
Poster Presenter: Theddeus I. Iheanacho, M.D.
Lead Author: Chioma Shiweobi
Co-Authors: Kathy Unkel, Kristina Dalao, Daniel Marcotte

SUMMARY:
Background: Diabetes mellitus (DM) rate among homeless veterans is about twice the rate in the general population(1). There is also a higher prevalence of diabetes among people with severe mental illness (SMI) compared to general population(2). Thus homeless veterans with SMI are at significantly higher risk for DM. They also have more complications from DM(3). Diabetes self-management education (DSME) is the cornerstone of collaborative care for DM(4). It is a core component of prevention and ongoing treatment of DM(5). Yet only a quarter of homeless adults with DM access DSME(6). The reasons for this low utilization are multiple and include lack of access to providers with interest and training in DSME. Peer-led DSME have been shown to be at least as effective as provider-led DSME (7-9). This project aimed to increase access to DSME for homeless veterans with SMI and DM by training previously

homeless veterans with SMI and DM to lead group DSME classes for their peers in the community. Methods: Using community engagement research methodology(10) we implemented "Vet-to-Vet", a DSME program led by veteran peer leaders on the frame work of existing homeless programs at VA Connecticut Healthcare System. The veteran leaders completed a 4-day intensive Stanford DSME training program(11). The training included all the components of the American Association of Diabetes Educators Standards plus modules on self-care in specific housing settings such as managing medications and diet while in a shelter, abandoned buildings or in the street. Trainees' competence was evaluated via pre- and post-knowledge tests and two supervisor-observed practice sessions. Peer-led "Vet-to-Vet" DSME workshops was thereafter rolled out in two community centers for homeless veterans with DM and co-morbid, severe mental illness. The DSME workshops are held weekly for 6 consecutive weeks. Results: Five veterans and six case managers were initially selected for the pilot training and seven (64%) completed the training and became certified DSME leaders. There have been altogether four, 6-week "Vet-to-Vet Group DSME" workshops. At present, 35 homeless veterans with DM and SMI have signed up to for the workshops and 28 (80%) have completed all six sessions. There were 25 males (90%) and 3 females (10%). Baseline data: Only (2%) of participants had received DSME in the previous year. The average Hemoglobin A1c level was 8 and average BMI was 31. The most common co-morbid psychiatric diagnosis was major depressive disorder followed by post-traumatic stress disorder. Patient-centered and clinical outcomes at 3 months, 6 months and 12 months follow up to are pending. Conclusion: Homeless veterans with a diagnosis of DM and SMI can be successfully trained to lead community-based group DSME workshops for their peers with staff support. Pending data analysis will determine the impact of these "vet-to-vet" DSME groups on diabetes clinical outcomes.

No. 165

Resilience Through Reflection: Creating a Narrative Medicine Curriculum in a Child and Adolescent Psychiatry Fellowship

Poster Presenter: Shama Rathi, M.D.

SUMMARY:

Background: Physician burn out is a well-established epidemic that plagues the medical profession. Burnout adversely affects physician attitudes and can cause medical errors that have a meaningful impact on patient outcomes. Formal programs attending to wellness are required by the Accreditation Council for Graduate Medical Education. An emerging body of literature demonstrates that narrative medicine curriculums may help trainees foster empathy, self-efficacy and promote well-being amongst resident physicians. Reflective curriculums have been implemented across specialties in emergency medicine, internal medicine, obstetrics and gynecology, and pediatric residency programs. Psychiatry trainees experience high levels of secondary traumatic stress, emotional exhaustion and compassion fatigue that affects self-efficacy and patient care. The purpose of this study was to design and implement a narrative medicine curriculum that was unique and tailored to the needs of child psychiatry trainees. Methods: Child and adolescent psychiatry fellows participated in a group consensus approach incorporating the nominal group technique to identify themes around which to structure 5 workshops for each of the two fellowship years. Five hour-long sessions using literature selections, discussion questions and reflective writing prompts relevant to each of the selected topics were created for each year in the two-year fellowship curriculum. Results: A total of 10 1-hour narrative medicine workshops were created and structured to be reflective writing workshops tailored for each fellowship year. Workshops created included "Being a Fellow", "Challenging Systems", "Efficacy", "What is my place here?" and "Observing other people's families". 20 child and adolescent psychiatry fellows participated in the process and are enrolled in the narrative medicine curriculum. Conclusion: Collaboration with fellows in the design and implementation of a narrative medicine curriculum results in the development of a curriculum focused on topics germane to the experience of child and adolescent subspecialty training. This curriculum can be incorporated into scheduled didactics for the fellows and may provide a means of promoting engagement and reducing burnout. The impact of this intervention will be evaluated through using measures of burn-out

(Maslach Burnout Inventory), satisfaction and engagement (Professional Quality of Life Scale and Quality of Life Index.)

No. 166

Mobile Buprenorphine Treatment for Homeless Patients With Opiate Use Disorder: Lowering Treatment Barriers at the Intersection of Two Crises

Poster Presenter: Colin David Buzza, M.D., M.P.H., M.Sc.
Co-Authors: Melanie Thomas, M.D., M.Sc., Aislinn Bird, M.D., Jeffrey Seal, M.D., Christina V. Mangurian, M.D.

SUMMARY:
Background: In the U.S. opioid-related overdose deaths have increased dramatically over the last two decades. Opioid overdose deaths are particularly high in homeless populations, and may be the leading contributor to a dramatically increased mortality rate among homeless versus housed individuals. Homelessness also creates barriers to accessing structured, office-based buprenorphine treatment that reduces illicit opioid use, mortality, and overall costs. Lowering treatment barriers with a flexible, harm reduction approach may improve access for homeless populations, but implementation and evaluation of such programs has been insufficient. Our study describes the development, implementation, and evaluation of a mobile buprenorphine treatment approach integrated in a larger street psychiatry service. The program is being developed by Alameda County Health Care for the Homeless, which serves a populous, urban county where opioid-related emergency visits and overdose deaths are on the rise, and where homelessness has increased by 39% from 2015 to 2017. Methods: This mixed-methods study will describe program design, implementation, and initial evaluation using a Plan-Do-Study-Act (PDSA) approach. We will record data used to inform program design and subsequent PDSA cycles. Data will include themes from semi-structured and informal interviews with key stakeholders including experts in addictions and behavioral health outreach, local outreach organizations, and program staff and providers. We will also record initial quantitative process measures including number and location of patients who are evaluated, meet participation criteria, accept buprenorphine, initiate treatment, and remain in treatment. The initial PDSA process is underway and data collection will continue through March 2018. Results: Program design and initial PDSA cycles will be described, including program elements, key qualitative themes regarding feasibility and acceptability, and initial data on treatment uptake and retention. Final data collection and analyses will be completed in time for presentation at the APA conference in May 2018. Conclusion: The high incidence of untreated opiate addiction and overdose mortality among homeless residents calls for creative solutions to increase access to buprenorphine treatment among this population. Low-barrier, mobile buprenorphine treatment may be an acceptable and feasible way to reach homeless individuals with opiate use disorders who would otherwise be unable to access treatment. The challenges and successes of our implementation effort can inform other systems interested in implementing mobile buprenorphine treatment for homeless populations.

No. 167

Positive Amphetamine Screen in a Credible Patient Who Strongly Denies Use

Poster Presenter: David M. Marshall, M.D.
Co-Author: Shannon Kinnan, M.D.

SUMMARY:
Urine drug screens are commonly utilized when a patient presents with psychiatric symptoms as his/her chief complaint, regardless of whether the patient presents to an Emergency Department setting or an inpatient psychiatric hospital. The goals of the screen can be to confirm use of illicit drugs and/or non-prescribed medication, provide objective information, confirm use of prescribed medication, and facilitate doctor-patient communication. The screens are widely available and generally cost-effective, but are prone to false positives. Many clinicians fail to recognize potential causes of false positive and false negative results seen on the screen. Here we present the case of a 50 year-old Caucasian male with a history of depression and alcohol use disorder (a 'functional alcoholic'), who presented to an ED in the Midwest following an intentional overdose of Lamictal. He admits to drinking alcohol heavily daily, presenting with a BAL

of 74. His urine drug screen is positive for amphetamines. Following medical clearance he is admitted to a psychiatric hospital, where he strongly denies any recent history of illicit drug use and any history of using an amphetamine-containing drug. He offers a possible explanation for his positive test – while binging on alcohol in the past few days, patient consumed cough syrup, which he thinks contained all of the following ingredients: dextromethorphan, guaifenesin, and pseudoephedrine. In this poster, the authors will present general urine drug screen false positives and negatives, information regarding the testing analytical techniques, further information on confirmatory testing, and the conclusion to the presented case.

No. 168

Essential Fatty Acids and Barratt Impulsivity in Gambling Disorder

Poster Presenter: Jeronimo Saiz-Ruiz, M.D.
Co-Authors: Angela Ibañez, Patricia Sanchez

SUMMARY:

Background: Polyunsaturated fatty acids (PUFA) have been long implicated in the etiopathogenesis of mental illnesses. Most of these disorders, such as attention deficit hyperactivity disorder (ADHD), substance use disorders, self-harm and aggression, are characterized by high impulsivity. Pathological gambling is an impulsivity disorder but the role of PUFA in its pathogenesis has not been well established yet. Methods: It is an observational and cross-sectional study. The sample consisted of fifty-five men with gambling disorder, who voluntary accepted to participate. Basal composition of PUFA in plasma and erythrocyte membrane was assessed by gas chromatography and mass spectrometry. Trait impulsivity was measured by the Barratt Impulsiveness Scale version 11 (BIS-11). Results: Araquidonic acid (AA)/eicosapentaenoic acid (EPA) ratio in erythrocyte membrane was negatively correlated with total scores in BIS-11. It was also observed that impulsive gamblers had a higher proportion of EPA and a lower value of AA/EPA and AA/docosahexaenoic acid (DHA) ratio in erythrocyte membrane than non-impulsive gamblers. Conclusions: These results add to preliminary findings that PUFA are linked to impulsivity trait. As far as we know, this is the first study which analyze this association with a sample of pathological gambling. More studies are needed to analyze the relationship between essential fatty acids and disorders characterized by high impulsivity.

No. 169

Management of Chronic Pain and Opioid Dependence With Buprenorphine/Naloxone: A Case Report

Poster Presenter: Lian-Yu Chen, M.D., Ph.D.

SUMMARY:

Management of chronic pain with opioid misuse could be exceptionally challenging.1,2 Not only clinical features of chronic pain and opioid addiction are difficult to differentiate, long-term opioid therapy for pain has been inadequately studied. Here we presented a patient with chronic pain and were therefore dependent to various kinds of opioids including meperidine and morphine. We used buprenorphine/naloxone (bup/nal) to treat his condition with dual diagnoses. In addition, we converted various kinds of opioids to morphine using the morphine milligram equivalents (MME) conversion factor to further adjust the dosage of (bup/nal). As a result, he showed marked improvement over his Clinical Opiate Withdrawal Scale (COWS) and Visual Analogue Scale (VAS) for pain.3 After discharge, he was able to maintain opioid-abstinent for one year; his occupational function was fully recovered. As buprenorphine/naloxone has relatively safe profile due to its ceiling effects, the possibility of overdose is relatively small. Buprenorphine, as a mu-opioid receptor partial agonist, kappa-opioid receptor antagonist, and opioid receptor-like (ORL1) receptor agonist, has pain relief effects.4 With the addition of naloxone to buprenorphine, the abuse potential is limited. This case demonstrated how bup/nal could benefit individuals with dual diagnosis of chronic pain and opioid addiction.

No. 170

Grit in Patients With Substance Use Disorder

Poster Presenter: Margaret Griffin

SUMMARY:

Introduction: Grit is an emerging concept in positive

psychology, defined as the ability to be persistent and focused in pursuit of long-term goals. This concept has received a great deal of interest recently because of its robust ability to predict success and well-being across a wide variety of domains. The study aim was to examine the clinical relevance of the construct of grit among patients with substance use disorders. Methods: Inpatients on a detoxification unit were enrolled from September 2013 to May 2017 (N=960). Psychometric properties of the Short Grit Scale (Grit-S) were examined, as well as comparisons of our participants to comparison samples. We then considered sociodemographic and clinical variables that might be associated with grit in this population. Results: In this sample of patients with substance use disorders, the total Grit-S demonstrated strong psychometric properties. Substance use disorder patients scored lower on the Grit-S than six samples reported in the literature, with one exception. Grit-S scores were higher among older patients, those with more years of education, and those currently employed; scores were lower among those never married, diagnosed with a co-occurring psychiatric disorder, whose primary substance was opioids, or who had used heroin during the past month, according to bivariate analyses. Gender, race, Hispanic ethnicity, and the presence of chronic pain were not associated with grit scores. Grit-S scores remained associated with age, employment, education, and presence of a co-occurring psychiatric disorder in adjusted analysis. Conclusions: This study provides initial support for the utility of the Grit-S among those with substance use disorders; this novel measure has not been previously reported in clinical populations other than our own research. Research examining grit prospectively is needed to determine whether the links between grit and outcomes observed in other populations apply to patients with substance use disorders.

No. 171

Illegal Drug Consumption Habits Between Penitentiary Populations

Poster Presenter: Oscar Porta
Co-Authors: Vanesa Sierra, Emilce K. Blanc, Gustavo Alonso

SUMMARY:

Introduction: Cannabis (“marihuana”) is probably the most frequent illegal substance worldwide. Some researchers consider that cannabis may be the “delivery door” to “heavy” drugs. We know that illicit drugs consumption is elevated between penitentiary population. Objective: To describe the prevalence of consumption between different illegal drugs in penitentiary population of the Buenos Aires City Federal Penitentiary Complex. Also describe the causes that initiate the consumption (experimental, model, trauma) and describe the prevalence of crime commited under the effects of drugs. On these data establish a correlation between the cannabis consumption and “heavy drugs” (cocaine, paco, solvents) Material and methods: Transversal and descriptive study of 157 correlatives cases of the Buenos Aires City Federal Penitentiary Complex. The methodology was a semistructured interview. Spearmen method was used to correlate cannabis and heavy drugs. Results: The media population age was 31.3 (8.9) years old. The prevalence of drug consumption was 64 %. The most frequent drug was cannabis. 45 % recognized the experimental, 33% the model of pairs and 15% a vital trauma as the cause to initiate the consumption. Only 16% recognized to commit crime under the effect of drugs. Correlation between cannabis and heavy drugs was nule. Conclusions: The habit of illicit drugs consumption is 15 folds higher than the general population. Marihuana was the most frequent drug. The experimental and model were the most frequent causes to initiate consumption. The theory of the “delivery door” appears a weak hypothesis in this cohort. Key words: Penitentiary population. Illegal drugs. Consumption.

No. 172

Prevalence and Correlates of *DSM-5* Cannabis Withdrawal Syndrome: Findings From the National Epidemiologic Survey on Alcohol and Related Conditions-III

Poster Presenter: Ofir Livne
Co-Authors: Shaul Lev-Ran, Deborah Hasin, Ph.D.

SUMMARY:

Background: Alongside the realization that cannabis withdrawal is evident and common1–3, reports indicate that cannabis withdrawal symptoms can severely disrupt daily living4,5 and are positively

associated with both relapse to cannabis use6–9 and with cannabis dependence10–12. Nevertheless, previous studies, examining the prevalence and correlates of cannabis withdrawal symptoms, demonstrate inconsistent findings and have fundamental limitations. To date, no large-scale study investigated cannabis withdrawal syndrome (CWS), a composite cannabis withdrawal diagnostic criteria, included in the DSM-V13. The aim of this cross-sectional analysis was to explore the prevalence and clinical correlations of DSM-V CWS. Furthermore, we investigated the link between CWS and various internal and external factors associated with other cannabis-related disorders. Methods: Data were drawn from wave 3 (2012-2013; N=36,309) of the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC). The study sample comprised of 1,527 participants, who were past 12-month frequent cannabis users. A cannabis withdrawal variable was constructed, consistent with criterion B of the DSM-V CWS. We calculated the weighted prevalence of past 12-months CWS and of each of its 12 symptoms experienced by participants in the sample. Odds ratios were calculated to examine the association between CWS and sociodemographic characteristics, psychiatric comorbidities, and substance use disorders. Other factors examined in relation to CWS included family drug history, disability measures (SF-12), poverty/employment measures, perceived social support measures (ISEL-12 scale) and treatment utilization. Results: 12.14% of the entire study sample experienced CWS in the past 12 months, with highest rates reported for nervousness (76.34%), irritability (71.86%), and sleep difficulty (68.15%). There were no significant differences in gender and other sociodemographic characteristics between participants with and without CWS. Cannabis use disorder (CUD) was associated with CWS and this association became stronger as the severity of CUD increased. Numerous past 12-month psychiatric disorders (including mood, anxiety, and personality disorders) and certain lifetime substance use disorders (SUDs) were significantly correlated with CWS. Participant in the sample had significantly lower scores on the SF-12 mental component scale and on the total ISEL-12 scale and its subscales.

No. 173

Psychometric Development of the Problematic Stock Trading Scale

Poster Presenter: Sungwon Roh, M.D., Ph.D.

SUMMARY:

Background: Despite the increased retail investors and growing concern about their addictive behaviors over the past few decades, there are no reliable and valid instruments for assessing problematic stock trading. The aim of this study is to develop a Problematic Stock Trading Scale (PSTS), a valid and reliable scale measuring problematic stock trading. Methods: A sample of 500 retail investors participated in this study. Twenty-two items (about 2 times the final number of items) were initially selected as preliminary items, based on previous addiction scales such as gambling and substance use disorders as well as the clinical experience of involved experts. Final items of the PSTS were determined by exploratory factor analysis. Results: Three core factors related to the problematic stock trading were revealed from the exploratory factor analysis. The 12 items of PSTS consisted of 5 items from preoccupation factor, 4 from risky investment factor, and 3 from cognitive distortion factor. Reliability and external validity were confirmed. Conclusions: The present findings highlight the potential use of the PSTS for future research and possibly on clinical applications by defining problematic stock trading as a behavioral addiction.

No. 174

Psychoactive Substance Consumption and Negative Cadaveric Coping in Anatomy Students

Poster Presenter: Martín Javier Mazzoglio Y. Nabar, M.D.

Co-Authors: Elba Tornese, Daniel Algieri

SUMMARY:

Introduction: In preliminary studies we found a significant level of consumption of psychoactive substances among students of Anatomy in the Medicine course, mainly among those who are attending the subject again and/ or those with working activities, this was associated with the amount of hours the subject implies and its demands. The way in which the student faces the cadaveric coping is an important distress factor associated with negative emotional reactions that

can be symptomatic (disgust or nausea, vomits, sleeping disorders) or increase the use of psychoactive substances. The Objective of this paper is to evaluate the use of them in those students with negative cadaveric coping. Materials and methods: Observational and transversal study applying an anonymous, structured and standardized survey to 740 students (years 2015,2016 and 2017), in the subject Anatomy which included The Templer's Death Anxiety Scale (Temple, 1970), questions about the use of psychoactive substances, socioeconomic parameters and terms associated with the concepts of "cadaveric material" and "anatomical piece" and their conceptual dimensions were investigated (free lists technique, Bernard, 1988). Those students who had already atended the subject were excluded. Several statistical parameters and the $p<0.05$ signification were applied and legal-ethical requirements were achieved. Results: We objectified a sustained increase in the use of psychoactive substances as an Objective of increasing the amount of hours the student spends studying. According to prevalence, we registered the consumption of energy drinks, coffee, modafinil, acetylsalicylic acid and anxiolytics. Among the ones who faced a negative coping, the prevalence of use and physical reactions were higher ($p<0.5$) and, there was a correlation between the amount of psychoactive substances used and the degree of negative reactions ($r=0.85$). The group which included those students with negative coping, the use of anxiolytics had a higher prevalence in relation with the stimulating substances (modafinil). Conclusions: We ratified a high and sustained prevalence in the use of psychoactive substances by the students who attend Anatomy. We found an increase in the consumption of psychoactive substances between those students who showed a negative cadaveric coping, particularly who are under working conditions. Key words: Substance consumption. Cadaveric coping. Anatomy. Academic stress.

No. 175

Apathy and Depression in People Living With HIV: Differential Attentional and Functional Neuroimaging Alterations

Poster Presenter: Martín Javier Mazzoglio Y. Nabar, M.D.

Co-Author: Elba Tornese

SUMMARY:

Introduction: Depressive symptoms have a high prevalence and importance in the chronic diseases and may be a limiting factor and a complication due to its negative impact. Las People living with HIV (PVVIH for its syllables in Spanish) show clinical specificities in their depression disorder with a high degree of apathy and resistance to a treatment, all these generate a sub-diagnosis, unfinished treatment, higher degree of suicidality and association with neurocognitive alterations. Objective: Determine the prevalence of the depressive disorder and apathy in PVVIH, to describe its impact in the attention and in the functional neuroimaging, with specification from the applied differential parameters applied to assistential clinic. Material and method: We studied 38 PVVIH, negative viral load, masculines with a depressive disorder (F32.9, DSM IV) and apathy according to neuropsychiatric evaluations (MINI, Hamilton Depression Rating Scale, Apathy, Evaluation Scale clinical version and Neuropsychiatric Inventory), ages between 26 and 49 years old, with no impairment nor co-infections, highly active antiretroviral therapy with no psychopharmacological treatment (antidepressant, antipsychotic or anticonvulsant). They were evaluated with neurocognitive tests (Stroop test, Trail Making Test A and B, digit-symbol d2 test) and Single Photon Emission Tomography was used. We applied statistical parameters and the ethic-legal rules were accomplished. Results: We found a high degree of prevalence of apathy which altered in a meaningful way the alternate attention and divided en comparisson with the focused and sustained. We determined hypoperfusion in the cingulum cortex from the frontal left cingulum cortex and in the caudate in an asymmetrical way. The hypoperfusion in the frontal left cingulum correlated with the former left and caudate ($r^2= 0.86, 0.88$) and proportional with the severity in the apathy test ($r^2= 0.84$). Conclusions: Apathy in patients living with HIV and depression show specific and differential neurocognitive alterations in the attentional domain. There were neurofunctional alterations within the striatal cells and the insula, correlated with the affectation in the cingulum cortex. Key words: HIV,

Depression, Apathy, Attention, Functional Neuroimaging

No. 176

Citicoline in Patients With Neurocognitive Disorder Associated With HIV: Research on Pharmacoclinical Eficacy Within 180 Days of Treatment

Poster Presenter: Martín Javier Mazzoglio Y. Nabar, M.D.

Co-Authors: Milagros Muniz, Alexis Mejias de la Mano, Santiago Munoz, Matias Garcia, Guillermo Nicolas Jemar, M.D.

SUMMARY:

Introduction: Citicoline acts a Pioneer of the phospholifid membrane and increases the acetylcholine synthesis.The Neurocognitive alterations associated with HIV (ANCAVIH for its syllables in Spanish) have a high level of prevalence and an impact in the quality of life, daily activities and adherence to treatment with an increase in morbi- mortality. There is no specific pharmacological treatment or guides of pharmacological approach of the ANCAVIH and different symptomatic strategies with low scientific evidence which can show interactions with the antiretroviral drugs in the patients. Objective: To report the Clinical eficacy and subjective aherence of citocoline during the treatment of ANCAVIH after 180 days of treatment. Materials and methods: We reported a number of 41 male patients with positive HIV, average age 46.7 under antiretroviral treatment, with neutralized viral loads, treated with citicolin due to ANCAVIH. 39.02% went faced Neurocognitive rehab. We applied different scales for evaluating: adverse effects (UKU) subjetive adherence (DAI) and daily life activities (Barthel's index) and global Neurocognitive Evaluation. Biochemical controls were made and the ethic-legal requirements were accomplished. Results: Citicoline resulted effective within 22 days of treatmemte with an average dose of 320 mg/d; there were mild adverse effects and time dependents; no interactions with antiretroviral nor biochemical alterations were registered. The TITULATION time was inversely associated with efficacy (r2= 0.80), positive response (r2=0.88) and adherence (r2= 0.78).There were objectified improvements in the Neurocognitive scales, especially in the attentional sphere and processing speed. The group which is in mixed cognitive rehab showed improvements in the scales. There were nor biochemical alterations in blood with the use of, neither citicoline nor drug to drug interactions. Conclusions: Citicoline showed efficacy and security for the treatment of Neurocognitive alterations related to HIV. Its combination with cognitive rehabilitation had its meaningful quantitative benefits in the cognition and functionality of the patients. Key words: Citicoline. Neurocognitive Impairment. HIV.

No. 177

Acute Dystonia Caused by Aripiprazole in Patients With Cocaine Consumption Disorder

Poster Presenter: Martín Javier Mazzoglio Y. Nabar, M.D.

Co-Authors: Milagros Muniz, Schraier Gabriel, Eduardo Rubio Dominguez, Matias Garcia

SUMMARY:

Introduction: Acute Dystonia is a clinical state characterized by alterations in the muscular tone, in a focal way and accompanied by anxiety symptoms. Its physiopathology is related to an imbalance in the domaminergic-choligerngic system from the basal ganglia with an overstimulation in the cholinergic, and within its risk factors the use of antipsychotics is reported (high power, high dose, o sudden increases in its dose). Aripiprazole is an antipsychotic that shows a low risk when producing extrapyramidal syndromes given its pharmacodynamics profile in receptors D2y 5HT2A but because of a weak blockade of α1 the action over the cholinergic system is weak. Objective: To report the association between acute dystonia and the use of aripiprazole in patients with a cocaine consumption disorder. Material and methods: Report of a series of cases (n=5) in patients with an abuse cocaine consumption disorder (F 14.1, DSM IV-TR), 3 males and 2 female, with an average age of 41.4 years old, in an interdisciplinary outpatient treatment (psychiatric, individual and group psychoterapeutic and occupational therapy), having an average treatment time higher to 2 months and an average cocaine consumption time of 72 hours. The patients were prescribed pharmachological with antipsychotic treatment plan (aripipripazole in 5 cases, quetiapine in 3), anxiolytics (pregabaline in 4 cases, lorazepam

in 3) and mood stabilizer (divalproex sodium in 3 cases). A scale for dystonies evaluation was applied (AIMS, Burke et al., 1985), assignability criteria based on the Algoritmo de Naranjo from the WHO for classifying the drug adverse reaction and there were neuroimages made (RM). All the patients presented biochemical studies in a normal range (hemogram, liver and kidney function, ionogram, proteins and thyroid hormonal dosing), with no meaningful clinical comorbidity from neurological or neurosurgical pathology. Bibliography related to the subject was revised and the current ethic-legal requirements were accomplished. Results: In all cases the temporal relation and dissapearance of the drug adverse reaction with aripiprazole suspension. The adverse reaction was not a dependent dose, the disappearance dystonie was not related to the level of consumption and from the last consumption and there was not drug precription for the treatment. Acute dystonies case report induced by antipsychotics and with comorbid cocaine use is not abundant, but there were reported cases that represent a warning and some authors propose the preventive use of anticholinergic drugs because of the risk it represents. Conclusions: In the reported cases we confirmed the association between secondary dystonia in patients with a cocaine consumption disorder. Cocaine would represent a risk factor for the appearance of acute dystonia. Key words: Acute dystonia, Aripiprazole, Cocaine consumption disorder

No. 178

Effects of Adolescent Exposure to Atypical Antipsychotics on Behavior and Cognition in Adult Rats

Poster Presenter: Chul Eung Kim

SUMMARY:

Introduction: Atypical antipsychotics (AAPs) have been increasingly prescribed to adolescent patients with non-psychotic disorders such as attention deficit hyperactivity disorder and oppositional defiant disorder. This study aimed to investigate the effects of risperidone and aripiprazole on behavior and cognitive function in adult rats after long-term exposure to AAPs during adolescence. Methods: Juvenile (5 week-aged) male Sprague Dawley rats were intraperitoneally treated with risperidone (1mg/kg, N = 10), aripiprazole (3mg/kg, N = 10) or vehicle (control, N = 10) for 3 weeks. After the 2-week washout period, the locomotor, anxiety behavior, and spatial working memory of the rats in adulthood were evaluated, using open field test (OFT), elevated plus maze (EPM), and Y-maze test, respectively. Results: For the locomotor (OFT) and anxiety (EPM) parameters, there was no significant difference among the three groups. In the Y-maze test, we found a significant difference in spontaneous alternation performance (SAP), a working memory parameter, among the three groups ($F = 3.886$, $P = 0.033$). SAP in the aripiprazole group was significantly higher when compared to the risperidone group (post-hoc test $P = 0.013$) and marginally higher when compared to the control group (post-hoc test $P = 0.054$). In addition, alternate arm return (AAR), a memory impairment parameter, was more frequently observed in the risperidone group than in the aripiprazole group ($T = 2.404$, $P = 0.027$) or control group ($T = -1.936$, $P = 0.069$). Conclusion: This study provides preclinical evidence that long-term exposure to AAPs during adolescence might have an influence on cognitive function in early adulthood. Especially, our results suggest that aripiprazole might be more beneficial than risperidone in terms of adolescent cognitive development.

No. 179

WITHDRAWN

No. 180

Treating Refractory Schizophrenia With High Doses of Paliperidone Palmitate in Monotherapy: Case Report

Poster Presenter: Felipe De Medeiros Tavares, M.D.

SUMMARY:

Ms. M., a 41-year-old female with a psychiatric history of schizophrenia (DSM-5) since 21, presents herself to the psychiatric consult service with a recurrence of psychotic symptoms (altered mental status, incoherent speech, delusions and auditory hallucinations) and diminished emotional expression. The patient has had a history of schizophrenia since 21 years old and all past treatments have failed. Those treatments included first generation antipsychotics such as Haloperidol,

Chlorpromazine, Thioridazine, and second-generation antipsychotics such as Risperidone, Quetiapine, Olanzapine, Ziprasidone, Asenapine and Clozapine, all of them in appropriate dosages for long periods (above 6 weeks). As the treatments efforts have failed, it was decided to substitute the therapeutics to Paliperidone Palmitate (PP), a second generation antipsychotic (extended-release injectable suspension), with starting dose of 150 mgEq in monotherapy. After 06 weeks she reached remission, however, there was a recurrence of symptoms at week 12, mainly positive symptoms. Subsequently, the dosage was increased to 225 mgEq and 4 weeks after, to 300 mgEq (one injection of 150 mg eq. each 15 days). She remained with this dosage for 12 weeks, alternating applications between the gluteus and deltoids. Nonetheless, after 22 weeks of treatment, the patient presented a new recurrence of symptoms such as delirious perception and paranoia. The patient was satisfied with the PP treatment, the tolerability and dosage convenience were adequate, therefore it was decided to readjust the dosage to 450 mgEq, to be applied as a 150 mgEq. ampoule every 10 days, alternating between both deltoids and gluteus. Transaminases, prolactin levels, and ECG with QT interval were requested in order to evaluate possible alterations. The complementary tests did not reveal any abnormalities. The patient remained with this dosage for 21 weeks, with complete remission of symptoms and excellent tolerability. The prolactin levels after the new PP adjustment were slightly elevated and the ECG performed every 6 months presents normal results. This case report demonstrates that high dosages of PP in monotherapy (450 mgEq) were well tolerated in treatment-refractory schizophrenia, and promoted functional recovery.

No. 181

Safety/Tolerability of Atypical Antipsychotics in the Treatment of Bipolar Depression: A Systematic Review and Meta-Analysis

Poster Presenter: Katsuhiko Hagi

SUMMARY:

Aims: The aim of this systematic review and meta-analysis was to meta-analytically compare atypical antipsychotics (AAPs) regarding clinical harms during the acute treatment of bipolar depression. Methods: We conducted systematic review and meta-analysis of randomized, placebo-controlled trials (RCTs) assessing the adverse effects of AAPs in patients with acute bipolar depression to compare clinical harms. Clinical harm outcomes included adverse effect-related discontinuation rates, sedation/somnolence, dry mouth, body weight change and 7% body weight gain. Results: We identified 22 RCTs with a total sample size of 8,823 patients. Cariprazine, lurasidone, olanzapine, and olanzapine+fluoxetine were generally well tolerated, as there was no significant difference between these AAPs and placebo in adverse effect-related discontinuation rates. Conversely, aripiprazole, quetiapine, and ziprasidone had significantly higher discontinuation rates due to adverse effects (risk ratios(RRs)=1.49-2.29). Except for cariprazine and lurasidone, AAPs had significantly higher risk of sedation/somnolence than placebo (RRs=2.42-3.61). Olanzapine, olanzapine+fluoxetine, and quetiapine had significantly higher risk of dry mouth (RRs=2.02-3.80). Cariprazine, and quetiapine had significantly higher body weight gain than placebo (effect size=0.42-1.19). Finally, and quetiapine had significantly higher risk of ≧7% body weight gain (RRs=2.93-69.27), with olanzapine and olanzapine+fluoxetine having single digit numbers-needed-to-harm (NNHs=5-6), and with double digit NNHs for lurasidone (NNH=59) and quetiapine (NNH=20). Conclusions: Results from this meta-analysis suggest that there are some significant differences in the clinical harm potential among AAPs in the treatment of bipolar depression. New drug development needs to focus on trade-offs between clinical benefit and harm.

No. 182

Psychotropic Drugs in Postural Orthostatic Tachycardia Syndrome (POTS) Patients

Poster Presenter: Sami B. Alam, M.D.
Lead Author: Haitham Ahmad
Co-Author: Nabihah Chaudhary

SUMMARY:

Introduction : Postural Orthostatic Tachycardia Syndrome (POTS) is primarily a disease of young females , Affecting approximately 1,000,000 and 3,000,000 Americans, and millions more around the

world. We frequently found usage of psychotropic drugs in POTS patients Psychotropic agents , commonly ; Selective Serotonin Reuptake Inhibitors (SSRI)s , Anti-depressants , benzodiazepines and others , are prescribed to manage psychological illnesses –most commonly depression and anxiety- that may occur secondary to having chronic medical diseases, or in association with POTS. The aim of this study is to identify the incidence of using psychotropic drugs in patients with Postural Orthostatic Tachycardia Syndrome (POTS). Method : 792 patients were selected randomly from the our clinic with POTS. Patients drug histories were reviewed from their electronic records. Psychotropic drugs found are : Selective Serotonin Reuptake Inhibitors SSRIs (Sertraline , Fluoxetine , Escitalopram , Citalopram , Paroxetine) , Serotonin and Epinephrine Reuptake Inhibitors SNRIs (Cymbalta, Effexor) , Serotonin Antagonist and Reuptake Inhibitors SARI (Trazadone) , Tricyclic Anti-depressants TCAs (Amitriptyline , Nortriptyline) , atypical anti-depressants (Wellbutrin , Mirtazapine , Ambien) , anti-psychotics (Quetiapine , Riseperdal , Aripiprazole) , anti-epileptics (Clonazepam , Topiramate , Lamotrigine) , Benzodiazepines (Alprazolam , Lorazepam , Diazepam , Temazepam) , CNS stimulants (Adderall , Ritalin , Vyvance , Tenex) , Anti-neural pain medications (Gabapentin , Lyrica)). Results : Out of the total 792 patients , 292 (36.86%) are prescribed to psychotropic drugs ; 76 (25.68% out of total) are SSRIs users { Sertraline (10.27% of total , n=30) , Fluoxetine (8.56% of total , n=25) , Escitalopram(4.11% of total , n=12) , Citalopram(2.05% of total , n=6) , Paroxetine(1.027% of total , n=3) }. 21 (7.19% out of total) are SNRIs users { duloxetine (5.13% of total , n = 15), Venlafaxine (2.05% , n = 6). 33 (11.30 % out of total) are SARI users { Trazadone (11.30% n = 33) } . 17 (2.14% of total) are TCAs users { Amitriptyline (4.45% of total , n = 13) , Nortriptyline (1.37% of total , n = 4) }. 14 (4.79% of total) are atypical Anti-Depressants users { Bupropion (2.39% of total , n = 7) , Mirtazapine(1.71% of total , n = 5) , Zolpidem (0.68% of total , n = 2) }. 12 (1.51% of total) are Anti-Psychotics users { Quetiapine (1.36% of total , n = 4) , Risperidone (1.027% of total , n = 3) , Aripiprazole (1.71% of total , n = 5) }. 81 (27.73% of total) are Anti-Epileptics users { Clonazepam (6.3% of total , n = 47) , Topiramate (16.095% of total , n = 21) , Lamotrigine(4.450% of total , n =13) }. 87 (29.79% of total) are Benzodiazepines users { Alprazolam (17.12% of total , n =50) , Lorazepam (6.84% of total , n = 20) , Diazepam (5.47% of total , n = 16) , Temazepam (0.34% of total , n = 1) }. 52 (19.84% of total) are CNS stimulants users { Amphetemine

No. 183
WITHDRAWN

No. 184
WITHDRAWN

No. 185
Good Night's Sleep: An Audit to Study Antipsychotic Prescriptions for Insomnia in the Mentally Ill
Poster Presenter: Ibrahim Alfurayh
Co-Author: Pallavi Nadkarni, M.D., M.B.B.S., M.Med.

SUMMARY:
Background: Insomnia is a common symptom of mental illness. Evidence suggests that second-generation antipsychotics are increasingly used to treat insomnia. Quetiapine is widely prescribed despite lacking evidence. Despite the low doses typically used for insomnia, metabolic adverse effects can occur. Literature search revealed six relevant guidelines from Europe and North America. Most guidelines do not recommend antipsychotics as first line for insomnia because of lack of evidence and harmful side effects. Standard used: Quetiapine and olanzapine are suitable for patients with comorbid insomnia who may benefit from the primary action of these drugs. Objective: This audit was conducted to compare our practice with this standard as a quality improvement project. Methodology: After seeking ethics approval charts of 178 patients consecutively admitted in 2012 to a mental health inpatient unit were scanned to identify antipsychotic prescriptions. These were analysed for indications. Those prescribed for insomnia were matched against the identified standard. Results: There were 151 prescriptions for 130 patients (73%). 29 patients were prescribed multiple antipsychotics. 48% were for psychosis, 20% for mood stabilisation and 13% for insomnia. 11% (n=19) of the total sample was prescribed quetiapine for insomnia in range of 12.5 to 200mg (M=62.5mg). 17 were females, 2 were males. The mean age was

42.5 years. Analysis of these 19 prescriptions revealed 100% were prescribed to address insomnia as a symptom and not the primary condition; major depressive disorder being the commonest (42%).7 of these prescriptions had an additional antipsychotic (risperidone or aripiprazole) to treat the primary symptoms. 21% had features of metabolic syndrome (side effect of quetiapine) and substance use disorder. 37% had borderline personality disorder. Discussion: In Australia 9.5% inpatients were prescribed antipsychotics for insomnia. Our practice showed similarity at 13%. This was least likely in patients with schizophrenia as observed earlier. Addictive personalities end up misusing quetiapine after it is prescribed to treat insomnia. This explains comorbid substance use in our sample. Significant proportion had borderline personality disorder in keeping with literature which states likelihood of overmedication in these people. Conclusion: Our practice did not meet the recommended standard. Use of antipsychotics in insomnia when diagnosis does not warrant usage, should be avoided. Optimising treatment for the primary psychiatric disorder is advisable instead. Future directives: Results will be disseminated through educational rounds. Practice will be reaudited six months later to measure any positive change in prescription patterns to complete the audit cycle.

No. 186

Study of Aggression Control Measures in a Mental Health Unit

Poster Presenter: Pallavi Nadkarni, M.D., M.B.B.S., M.Med.

SUMMARY:

Background: Physical aggression in the mentally ill is an imminent psychiatric emergency. This is often the result of unmet health, functional or psychosocial needs. Violence poses risk to both patients and care providers. Patients with medicolegal history and with certain psychiatric diagnoses such as schizophrenia, bipolar, substance use disorder and personality disorders are likely to face seclusion/restraint. Understanding variables affecting seclusion is important in developing effective interventions that can lead to improved outcomes risk mitigation. Nonpharmacological methods are often the first choice as per most national guidelines. Patient-centered psychiatric care recommends seclusion as the last resort. Objectives: To survey the seclusion/restraint practices in mental health inpatients and to enumerate the determinants of seclusion/restraint. Methodology: In Ontario, the Ontario Mental Health reporting System (OMHRS) stores data for adult inpatient mental health services in designated beds. The Resident Assessment Instrument-Mental Health (RAI-MH) is used to input patient data at specific times during the admission course. After seeking ethics approval from Queen's HSREB the inpatient data from 2012 to 2014 was analysed. Results: The sample comprised of 611 inpatients. Demographic profile revealed an equal distribution of genders, mean age of 44 years and unemployment in more than four-fifth. Affective and psychotic disorders were seen in 50% patients. Diagnoses such as anxiety disorders, substance use disorders and cognitive disorders comprised the other half. 1286 records of RAI-MH were found. Control measures were used in 11%%. Personality disorders, cognitive decline, substance use disorders were significantly associated with use of control measures ($p<0.01$). Risk to self/others correlated significantly with seclusion whereas inability to care for self was associated with mechanical/physical restraint or use of medications ($p<0.01$). Disruptive, abusive and wandering behaviours were positively correlated with all measures whereas inappropriate sexual behaviour was associated with all measures except medication use. Discussion: Our sample matched the CIHI figures for demographic profile. However, the rates of acute control measures (11%) were lower than Ontario average (24%). Lower association of control measures with psychoses may suggest staff level of comfort in managing these patients. Recommendations from BC and NICE guidelines may affect Ontario figures. A study in England has quoted use of aggression control measures in 7%. Future directives: The next step would be to correlate control measures and patient experiences.

No. 187

Disparities in Physically Restrained Patients in the Emergency Room

Poster Presenter: Zaira Khalid, M.D.

SUMMARY:

Physical restraints refer to any mechanical device, material or equipment that limits a patient's ability to move voluntarily. They are a common method employed in emergency departments, psychiatric inpatient facilities and crisis centers to ensure the safety of the patient as well as the staff involved in the care. The American Psychiatric Association (APA) indicates their use only when other means of control are not effective or appropriate and to prevent serious disruption of the treatment program or significant damage to the physical environment. Several reports have documented significantly higher incidences of physical restraint in inpatient younger populations and higher incidences of physical restraint have also been found to be strongly correlated to particular psychiatric disorders. Disparities in restraints exist even with patient's ethnicities demonstrated by prior studies. To our knowledge, no study to date has examined a possible correlation between patient BMI and rates of physical restraint in the emergency department. The purpose of this study is to identify ethnic, life style and demographic factors that increase the likelihood of physical restraints in psychiatric patients. We predict that the rate of physical restraints that occur in the emergency department are higher in minority populations, higher BMI, younger age and male gender. The primary outcome of this study is the association between the rate of restraints and variables such as BMI, ethnicity, gender and age in the emergency department. The secondary outcome is to evaluate if the rate of restraints is lower if a particular medication is used for agitation as first line treatment. Study Design: We will be using retrospective chart review of patients (over the age of 18) that have been physically restrained in the emergency department of a teaching institution. We will search for patients using orders that were placed in chart during their emergency room stay, which will include soft restraints and leather restraints. Our control group will be patients who were agitated but did not receive physical restraints. These patients will be identified using orders for medications that are commonly used in the ED for aggression/agitation; Olanzapine, Haloperidol, Geodon and Lorazepam. We will also search using key words of ICD-10 diagnosis, which include intoxication, schizophrenia, psychosis, ideations, and agitation. Variables such as the ethnic demographics of the population, prevalence of mental illness and addiction in particular ethnic groups, documented degree of aggression will be taken into consideration when analyzing the data. Results: Using our search criteria, we found 370 patients in a 6 month time period. 205 of these patients were excluded due to being restrained for medical purposes. Out of the remaining patients, 112 were physically restrained while the others received medications only or were found using code words such as agitation. We did not find a correlation between ethnicity and the likelihood of being restrained. We also did not find a statically significant correlated between BMI and the rate of restraints. We did, however, find that intoxication and having multiple psychiatric diagnoses listed in the chart were associated with an increased rate of physical restraints. We also discovered a correlation between the different medications given for agitation in the emergency room and physical restraints.

No. 188

Variables in Forensic Settings That Impact Health Measures

Poster Presenter: Gowri Ramachandran

SUMMARY:

The purpose of this study is to consider the health implications of extensive antipsychotic use, in the controlled setting of a long-term forensic psychiatric unit with limited dietary and physical activity options, where medication compliance can be monitored more strictly and health measures can be regularly assessed over time. Many of the second generation, or atypical, antipsychotics are associated with improved outcomes in the treatment of schizophrenia, including increased life expectancy, but are simultaneously associated with negative sequlae including metabolic syndrome. Little attention has been given to how the restrictions imposed by inpatient forensic units may further impact those negative sequelae that have been found to result from long-term antipsychotic use. Thus, our question of interest is: within an inpatient forensic psychiatric unit, where patients may have finite access to physical activity, as well as select nutritional options, are there clinically significant changes in measures of wellbeing (such as BMI,

blood glucose, HBA1C, lipid levels) when patients are exposed to long-term antipsychotic use? We will furthermore examine what differences, if any, are notable across gender and years of hospitalization.

No. 189

Changes in Beck's Scores in Patients Undergoing Pulmonary Rehabilitation Program

Poster Presenter: Soraya Aparicio, M.D.
Co-Author: Efrain Noguera, M.D.

SUMMARY:
Background: COPD is a chronic, progressive and inflammatory disease that alters and destroys lung's architecture leading to dyspnea, inactivity, peripheral muscle atrophy and disfunction. Social withdrawal, tissular hipoxia in COPD patients could contribute to depression that worsens inactivity and withdrawal , in a vicious circle. This prospective cohort analyzes the effect of achieving a Pulmonary Rehabilitation Program (PRP) on depression scores using the Beck Depression inventory II, in patients attending a high complexity hospital in a city located 2600 mts above the sea level, from 2002 to 2016 Method : All patients with COPD who completed an eight weeks, three times a week Pulmonar Rehabilitation Program between 2002 and 2016 were included, and changes in Beck´s depression inventory before and after the intervention were assessed. Beck´s scores were used as follows: 13 and below, no depression. Mild: between 14 and 20; Moderate: 21-18; severe: 29-63. Results. This analysis included 239 patients (106 females) mean age 71,8 SD+/-8.65. Beck's depression scores BEFORE PRP: Minimal 74,9% Mild 15,48% Moderate 7,11% Severe 2,51%. Beck's depression scores AFTER PRP Minimal 90,4 %Mild 6,6% Moderate 3,0% Severe 0% Differences in Beck's scores before and after PRP were statistically significant (p=0.000). Highest scored symptoms were "lost of interest in sex, fatigue, loss of energy, loss of pleasure, concentration difficulty, irritability, indecisiveness and self-dislike" Overall, there were no significant differences by gender. Among patients those that abandonned PRP (n=68), depressive symptoms were found in 30,88% (mild 22,06%; moderate 7,35 % severe 1,47 %)Other variables such as 6 minute walk, VEF1,MMRC (Modified medical research council dyspnea) showed statistical significant changes after completing PRP Conclusion: Pulmonar rehabilitation Program produces changes in Beck's inventory scores not only in somatic but in cognitive-affective domain.

No. 190

Mania and Psychosis in a Heart Transplant Patient Managed With Tacrolimus

Poster Presenter: Gregory Hoge, Ph.D.
Co-Authors: Mayowa Olusunmade, M.B.B.S., M.P.H., Samuel Oliver Sostre, M.D.

SUMMARY:
Purpose: The sudden emergence of affective and psychotic symptoms in any patient with a limited psychiatric history should prompt a search for secondary causes. Organ transplant recipients require immunosuppression, yet some such agents, especially cyclosporine, can induce psychiatric symptoms. Less is known, however, about the potential psychiatric effects of other agents, such as tacrolimus. Methods: We present a case of suspected tacrolimus-induced mania with psychotic features in a heart transplant patient with limited pre-existing psychiatric illness. Results: A 57 year-old-male heart transplant recipient, 20 months prior, and managed with tacrolimus was admitted to the Heart Failure Service with mental status alterations and evaluated by the consultation-liaison psychiatry service. In the prior two weeks his behavior had changed significantly with the emergence of pressured, nonsensical and tangential speech, excessive activity and reduced need for sleep, and irritable and aggressive actions. The patient had also displayed disorganized, grandiose, and paranoid thinking. He reported elevated energy levels, yet denied suicidal or homicidal ideation, denied auditory or visual hallucination, and denied use of drugs or alcohol. Despite this episode of mania and paranoia, he had no formal psychiatric diagnoses or prior psychiatric hospitalizations. However, he had been evaluated for depressive symptoms prior to transplantation due to difficulties adjusting to his medical conditions. Also, the patient had recently been prescribed amitriptyline (25 mg) at bedtime by a nephrologist for unclear reasons. On examination there was no evidence of delirium and laboratory and radiographic studies were normal, and the tacrolimus level was 17.8 ng/mL (nl 5.0 – 15.0

ng/mL) on admission. The tacrolimus dose was decreased, the amitriptyline was discontinued, and he was transferred to an inpatient psychiatric unit and the manic and psychotic symptoms subsequently resolved. Conclusions: Immunosuppression is a common and necessary treatment following organ transplantation. In this case, manic symptoms appeared within 20 months of tacrolimus initiation in a patient without a history of mania, suggesting this agent may have been a precipitating factor. Alternatively, initiation of amitriptyline may have precipitated a manic rebound. Manic symptoms due to bipolar disorder rarely present at such an advanced age, though, making the low-dose of amitriptyline a less likely cause. Therefore, tacrolimus should be considered as a precipitating agent for this manic episode. Similar psychiatric cases have been attributed to tacrolimus. So, while the condition remains rare, tacrolimus-initiated mania should be considered for those being treated with immunosuppression and exhibiting new-onset psychiatric symptoms.

No. 191

Vasculitis Presenting as Anxiety

Poster Presenter: Karla Lozano, M.D., M.B.A.
Co-Authors: Kevin Simonson, M.D., Toshia Ann Yamaguchi, M.D.

SUMMARY:

A 15 year old Hispanic female with no psychiatric history presented voluntarily to the ER with one month of nervousness, hot flashes, fatigue, decreased appetite, and a 20-pound weight loss. Psychiatry was consulted and patient reported that she was feeling stressed due to a month of worsening academic performance. Mother reported that patient had been nauseous and vomiting, which she attributed to anxiety, prompting her to bring the patient into the hospital for a psychiatric evaluation. Following initial evaluation, a diagnosis of “anxiety disorder due to another medical condition” was made due to the timeline of her presentation and development of her symptoms. Further workup revealed leukocytosis, elevated inflammatory markers, elevated creatinine, hematuria, proteinuria, microcytic anemia, positive ANA/MPO/pANCA and elevated factor 8. Kidney biopsy revealed a p-ANCA vasculitis, most likely microscopic polyangiitis. When a young patient presents with psychiatric symptoms in the context of somatic complaints and no previous psychiatric history it is important to first consider medical causes and perform a thorough laboratory and clinical workup.

No. 192

The Effect of Psychological Factors on Postoperative Pain in Gastric Cancer Patients After Endoscopic Submucosal Dissection

Poster Presenter: Joonhyub Lee
Co-Authors: San Lee, Han Ho Jeon, Won-Jung Choi

SUMMARY:

Background: Endoscopic submucosal dissection (ESD) is widely used for treatment of gastric tumor and post-ESD pain is one of the most common adverse events after ESD. So reducing pain after ESD is an important factor that greatly affects the quality of life and prognosis of patient of gastric tumor, but there is little research on psychological factors, as biological factors affecting pain are known. The objective of this study is to investigate the psychological factors affecting post-ESD pain in gastric tumor patients who underwent ESD. Methods: Ninety-one gastric tumor patients indicated with ESD who visited National Health Service Ilsan Hospital in Korean between May 2015 and June 2016 were evaluated. Baseline characteristics including sociodemographic factors were evaluated and Scales for anxiety, depression, interpersonal reactivity, resilience were done at the day before ESD. Hospital Anxiety and Depression Scale (HADS) was used as a measure of anxiety and depression and Korean Resilience Questionnaire scale (KRQ-53) was used as a measure of resilience. The group with high post-ESD pain was defined as a minimum of Visual Analogue Scale (VAS) score 3. Multivariate logistic regression analysis of the post-ESD pain was performed. Results: The group with high post-ESD pain showed lower alcohol consumption (p=0.008) and higher depressive symptoms (p=0.025) than those of the group with low post-ESD pain. Also, the group with high post-ESD pain showed lower resilience total score (116.57 vs 131.84, p=0.003) and among the sub-items, lower score of self-control (38.54 vs 44.81, p=0.002) and positive item (36.93 vs 42.56, p=0.003) than those of

the group with low post-ESD pain. Multivariate logistic regression analysis of the post-ESD pain showed that alcohol consumption was no correlation with post-ESD pain. In the results of this analysis, among resilience, especially low self-control ability (p=0.004, OR, 0.911; 95% CI, 0.854-0.971) showed a high correlation with high post-ESD pain. Conclusion: The study revealed that lower resilience, especially lower self-control ability lead gastric tumor patients undergoing ESD feel more postoperative pain. We recommend screening and paying attention to patients' resilience before ESD, which make appropriate, adequate pain control during ESD.

No. 193

Psychiatric Manifestations of Hyperostosis Frontalis Interna-Morgagni-Stewart-Morel Syndrome: A Case Report and Review of Literature

Poster Presenter: Antonio Leandro Carvalho de Almeida Nascimento, M.D.

SUMMARY:

Introduction: Hiperostosys frontalis interna (HFI) is an abnormality of the inner table of the frontal bones of the skull consisting of aggregations of smooth rounded enostoses covered by dura mater and projected into the cranial cavity. In the 18th Century, Giovanni Morgagni described a syndrome comprising HFI, obesity and hirsutism. In 1928, Stewart described psychotic symptoms in patients with HFI and Morel added polyphagia, polydipsia, disturbances of sleep, muscular weakness, loss of sight, headaches and epileptic seizures in 1930, which led to the definition of Morgagni-Stewart-Morel Syndrome (MSMS). Although HFI is an incidental finding in 2% of the asymptomatic population, its prevalence is much higher in patients of psychiatric institutions (up to 10.7%). In addition to the symptoms described by Morgagni, Stewart and Morel, patients with HFI might present frontal lobe dysfunction, cognitive impairment and depressive symptoms. Case Report: We report the case of a 53-year old woman with epileptic seizures since the age of six and benign cranial hypertension diagnosed when she was 12. At the age of 19, the patient started to present headaches, which were followed by hypothyroidism (at the age of 28) and auditory and cenesthetic hallucinations combined with persecutory, religious and somatic delusions at the age of 30. Over the next years, the patient presented several disturbances of self perception. At the age of 38, she attempted suicide three times. She was referred to the Clementino Fraga Filho University Hospital, where a brain MRI was performed and HFI was diagnosed. The patient presented remission of these symptoms after treatment with risperidone 6mg/day. Literature Review: PubMed and ISI Web of Knowledge databases were searched using the terms "hyperostosis frontalis interna" OR "Morgagni-Stewart-Morel Syndrome" combined with Psychosis OR Psychotic. Articles not written in English or without and abstract were excluded. We found three case reports, one case series and one case-control study which fulfilled our search criteria. These articles describe patients with HFI associated with a myriad of psychiatric symptoms including psychosis, depressive symptoms and cognitive decline. Discussion: The patient we have described presents similar features with the other patients described in the literature: a woman with psychotic symptoms, but no negative symptoms after several years of evolution and a history of severe headaches and seizures. Fortunately, the symptoms have remitted with the prescription of an antipsychotic, which is not always the case. Conclusion: HFI might be associated psychotic and/or depressive symptoms, cognitive decline, frontal lobe dysfunction, headache and seizures. When examining a patient with such combination of symptoms, one should investigate if the patient presents HFI. Further studies are necessary to evaluate the prevalence of each cluster of symptoms in patients with HFI.

No. 194

Hospício de Pedro II: A Nineteenth Century Insane Asylum in First Person Accounts

Poster Presenter: Antonio Leandro Carvalho de Almeida Nascimento, M.D.

SUMMARY:

Introduction: The Hospício de Pedro II (Pedro II Asylum) was the first psychiatric hospital built in Brazil. Comissioned in 1840 on the coronation of Emperor Dom Pedro II by the Emperor himself, the hospital was inaugurated 1852. From 1852 to 1944, the Hospício de Pedro II (or Hospício Nacional de Alienados – National Insane Asylum – as it was

renamed after the proclamation of the republic in Brazil) was on the forefront of psychiatric assistance, teaching and research in Brazil. Objective: To describe the Hospicío de Pedro II, its architecture, staff and treatments available using first person accounts. Method: PubMed and Scielo databases were searched with the keywords “Hospício de Pedro II”, “Hospício Pedro II” and “Hospício Nacional de Alienados”. The articles retrieved using this search process were selected if they presented first person accounts about the hospital. The references on these articles were also searched for other first person accounts. The Brazilian National Library archives were also searched using the same keywords. Results: Seven first person accounts related to the hospital have been found. These accounts have been written by four lay American visitors to the hospital (Daniel Parish Kidder and James Cooley Fletcher whose report was published in 1857 and Louis Agassiz and Elizabeth Cary Agassiz, whose report was published in 1868), two French psychiatrists who visited the asylum (Philippe Marius-Rey in 1875 and François Jouin in 1880), two Brazilian psychiatrists who worked at the hospital during their internship years (and would later become full professors of psychiatry at the Federal University of Rio de Janeiro, Maurício de Medeiros who reports his experience at the hospital in 1904 and José Leme Lopes, who describes the hospital in the 1920s) and one patient who wrote a diary during his hospitalization at the Hospício Nacional de Alienados, the Brazilian writer Lima Barreto (hospitalized in 1920). All the seven accounts mention architectural aspects of the building and characteristics of the staff, five accounts describe occupational therapy activities and two accounts mention the diagnostics of the patients. Discussion: In spite of being the the first psychiatric hospital in Brazil, there are few first person accounts of the Hospício de Pedro II during its more than 90 years of functioning as a psychiatric hospital. All first person accounts mention the luxurious architecture of the building, but in contrast to the architecture, almost all accounts report that hospital was understaffed, considering the large number of patients hospitalized there. Five of these accounts mentions the several occupational therapy activities and how they were benefical for the patients (including the account written by a former patient), but very few accounts describe other methods of treatment.

No. 195
When Psychiatrists Grieve
Poster Presenter: Omar Reda

SUMMARY:
I received a call from the oncologist, she was quite distressed, Jason had died. He told his mother to stop by his favorite restaurant, he ate his favorite meal, then his heart stopped beating the minute he entered his house, all his wishes were granted, with only minutes to spare. I was sad and confused, but mainly angry, angry at two ugly diseases that claimed the life of such a kind soul, angry at Jason for not following through with the treatment recommendations for his physical and mental health, angry at his family for being as sick and dysfunctional as he was, and angry at a system that makes it easy for sick people to make decisions that leave many broken hearts behind. What killed Jason was not his cancer, the cause of death here was psychiatric. I was also grateful that I knew Jason and was one of the people who made his last wishes come true, I was glad that I followed my gut feeling and chose compassion over what seemed “the most reasonable thing to do” at the time. I was terrified at the thought that I had the power to place him on psychiatric hold, deem him lacking capacity, or even send him to the inpatient psychiatric unit, all are options me and the oncologist struggled with before we chose to treat Jason as if he was our family member, and agree that he will better die at home with people who he loved and finally had closure with. I do not have closure though, yes it is not about me, but the death of my patient is about me, I do not have any regrets when it comes to the way all of our encounters went or the care he received, I just wish if there was something that I could have done differently to heal this family sooner. For a psychiatrist, the death of a patient by suicide is very traumatic, but other causes of death are not any less painful.

No. 196
The Refugee Trauma
Poster Presenter: Omar Reda

SUMMARY:

We might think, arguably justified, that coming to a new country is the end of the journey for refugees, but that is not usually true. For many, it could unfortunately be just the beginning of a new chapter in their trauma story. Even arriving at the shores of a safe land can be a traumatic event, as it severs ties of kinship and deprives survivors from their psychosocial support network. Refugees lose the support systems they left behind, and might face lots of struggles in the new culture, trying to learn a new language and pursue a dream. Many refugees try their best to quickly become self-reliant, they work hard to master the English language and navigate the job industry. Many of them, unfortunately, lose the American dream chasing it, because they might end up providing materialistically for their families but on the expense of their loved ones' emotional needs, a common, dangerous, and very damaging theme to family dynamics and especially to the psyche of young refugees. Refugees face multiple challenges before, during, and even after their forced choice to flee their countries. Leaving "home" is a very difficult decision even when one's life is at stake, to do so is not a luxury that people choose to afford, but rather a forced decision that carries very heavy emotional, relational, financial, and even spiritual consequences. One of the existential themes we notice in this population is that some refugees tend to be torn as to what is considered "home" now, some think that they need to give up their cultural or religious identity in order to "fit in" into the fabric of the host country.

No. 197

A Prospective Study Assessing Attitudes of Medical Students Toward Psychiatry Across Successive Training Years in South Korea

Poster Presenter: Seoyoung Yoon
Co-Authors: Seoyoung Jang, Hyeok Jun Jang, Geun Hui Won, Tae Young Choi, M.D.

SUMMARY:

Background: Unlike in other countries, psychiatry is a preferred specialty for medical students in South Korea. However, similar to other countries, stigmas about psychiatry exist in students in South Korea. This study aimed to identify the attitude of South Korean medical students toward psychiatry and to analyze how it changes through psychiatry lectures and clerkship. Methods: A total of 176 students from Daegu Catholic University School of Medicine were surveyed from February 2015 to February 2017. The student attitudes toward psychiatry were assessed at three points during the 2-year period: baseline, after psychiatry lectures, and following completion of their psychiatry clerkship. The self-reported Balon Attitudes Towards Psychiatry questionnaire (modified version) was used to evaluate student attitudes before and after each curriculum. Data were compared using Wilcoxon signed rank tests using SPSS Ver. 18. Results: Students who attended psychiatry lectures showed an improved attitude toward psychiatry in the following items: Q4 (Question 4): "If someone in my family was emotionally upset and the situation did not seem to be improving, I would recommend a psychiatric consultation," Q10: "Among mental health professionals, psychiatrists have the most authority and influence," Q14: "Psychiatrists frequently abuse their legal power to hospitalize patients against their will," Q18: "Many people who could not obtain a residency position in other specialties eventually enter psychiatry," Q19: "Psychiatry is a discipline filled with international medical graduates whose skills are of low quality," Q20: "My family would discourage me from entering psychiatry," and Q21: "Friends and fellow students would discourage me from entering psychiatry." Students who attended psychiatry clerkship showed a positive change in attitude toward psychiatry in the following items: Q8: "Most psychiatrists are clear, logical thinkers," Q10: "Among mental health professionals, psychiatrists have the most authority and influence," Q12: "Psychiatry is too biologically minded and not attentive enough to the patient's personal life and psychological problems," and Q16: "Teaching of psychiatry at my medical school is interesting and of good quality," but showed a negative change in attitude toward psychiatry in the item Q15: "On average, psychiatrists make as much money as most other doctors." Conclusion: After each curriculum, certain attitudes of medical school students toward psychiatry changed positively. However, some attitudes unchanged or changed

No. 198

Designing a Psychiatric Curriculum for Primary Care

Psychiatry

Poster Presenter: Channaveerachari Naveen Kumar, M.D.
Co-Authors: Narayana Naik Manjunatha, Suresh Bada Math, Jagadisha Thirthalli

SUMMARY:
Background: Role of primary care physicians (PCPs) in management for psychiatric disorders at primary care is undisputed. Apart from the well-known barriers for their effective functioning (poor psychiatric training during their undergraduate medical education, heavy case load, pressing need of other national health programs, poor motivation, etc), a well-suited curriculum is the one hitherto unattended. One such effort from the Primary Care Psychiatry team of National Institute of Mental Health and Neurosciences, Bengaluru, India is given the title "Clinical Schedules for Primary Care Psychiatry" (CSP). Methods: Available literature about primary care psychiatry was reviewed. These included ICD-10 primary care, PCPs manuals, Mh-Gap manual by the World Health Organization, etc. Additionally, rating scales meant for primary care (Patient Health Questionnaires, CMD screening questionnaire, WHO's Self Reporting Questionnaire) were reviewed. These materials suffered either by complexity, not adopted for PCP use, research oriented, time consuming, not consulted PCPs for their feedback, etc. A pilot testing of draft of CSP is done at a community mental health clinic by residents and nursing staff. Feedback from PCPs of Karnataka also incorporated. Considering all factors responsible, two essential threads were kept in mind during the process of designing CSP (a) brevity of the schedule as time is the essence for the PCP (b) while doing so, not to omit any essential information to diagnose and treat common psychiatric disorders that are likely to be encountered in primary care practice. Accordingly, we were able to come up with a schedule that could be used for out-patient management for adult patients. Essential elements of the curriculum include (a) guide to arrive at diagnostic categories (rather than specific diagnosis; psychiatric trans-diagnostic taxonomy) and (b) first line psychopharmacological dominated treatment protocol. Other important aspects are: (a) resources to manage stable patients when referred by a psychiatrist (b) culturally sensitive screening questions that can be used with minimal disruption of their workflow (c) information for ruling out general medical conditions and (d) guidelines for getting blood investigations. Treatment guidelines contains (a) information about onset of action (b) need for longer course of treatment (c) need for gradual tapering before stopping and probable duration of treatment for each disorder (d) counseling skills (e) PCP adopted doses in comparison to the maximum accepted doses and (f) side effects profiles of each medication. For addiction psychiatry, information about natural outcome of treatment is given to reduce therapeutic nihilism. Follow-up guidelines are also given. Conclusions: CSP is designed for clinical use of PCPs. Essential aim is to take into account the barriers for successful integration with-out losing clinical relevance. Needless to say, this kind of novel approach needs

No. 199

Psychiatry in Our Community: Increasing Communication With Primary Care Facilities and Development of Effective Activities

Poster Presenter: Miguel Nascimento
Co-Authors: Beatriz Lourenço, Jacob Macdonald, Joana Aguiar, Joana Reis, Mariana Silva, Mariana Lázaro

SUMMARY:
Background: With the change of focus of psychiatric care towards ambulatory care, and considering that psychiatric patients present a higher frequency of non-psychiatric comorbidities, there is an increased need to strengthen the collaboration with primary care facilities (PCF). This project aims to understand the spatial distribution of psychiatric patients relative to PCF in the health region of Lisbon, Portugal. Methods:Selection of all patients admitted to the acute psychiatric wards of Centro Hospitalar Psiquiátrico de Lisboa, between the years 2011 and 2016 (2,521 patients, 50.75% male, average of 53.3 years old). From the patients' files, the following variables were collected: age, gender, diagnosis (according to the International Classification of Diseases, tenth edition) and postal code of residency. The location of all PCF of Lisbon was obtained from the municipal authorities planning strategy and include a total of 17 facilities. Distance

between each patient and each PCF was estimated, in order to obtain a range of geographic variables include proximity and concentration of patients in incremental buffers of 100 meters from each PCF (conducted using R v. 3.3.1). Further disaggregation of patients, according to diagnosis groups. Comparative analysis of the data collected, identifying the PCF that had the smallest average distance of the patients, and the ones that have the biggest number of patients in each radius. Results: The average distance of the patients to each PCF is 3.16km (minimum of 2.23 and maximum of 4.57km). Considering a 1000-meter radius, the authors were able to identify two PCF that have more than 600 patients admitted to the hospital (23.8% of the total), which further had the highest admittance of each specific diagnosis. An additional 3 PCF had more than 450 patients admitted (17.9% of the total), also ranking in the top with regards to the number of admittances by diagnostic types. Conclusion: The identification of the PCF with the largest concentration of nearby patients may lead to the development of targeted measures regarding specific public health activities, psychoeducative programs at those facilities and more interaction with general practitioners, to increase the general healthcare of psychiatric patients and to prevent readmissions.

No. 200

Toward Targeted Community Care: Are Patients Spatially Related? Join-Count Spatial Autocorrelation Analysis for Overall and Specific Disorders

Poster Presenter: Miguel Nascimento
Co-Authors: Beatriz Lourenço, Jacob Macdonald, Mariana Silva, Joana Reis, Joana Aguiar, Mariana Lázaro

SUMMARY:

Background: There is an increasing focus of the role that psychiatric services play in community and ambulatory care, and recent local health initiatives have targeted these services. It is therefore relevant to better understand the spatial distribution of patients within a municipality in order to tailor service provisions. Namely, it is relevant to understand whether patients, and diagnoses, are located randomly throughout a geographic area or clustered over space. Methods: We select all patients admitted to the acute psychiatric wards of Centro Hospitalar Psiquiátrico de Lisboa, between the years 2011 and 2016 (2,521 patients, 50.75% male, average of 53.3 years old). From the patients' files, the following variables were collected: age, gender, diagnosis (according to the International Classification of Diseases, tenth edition) and postal code of residency. We spatially merge patients based on their postal code with available Census 2011 data at the census enumeration tract. Spatial autocorrelation was measured using join counting statistics, based on the number of existing pairs of adjacent patient/patient locations, considering 25x25 meters to represent the area of each patient. Statistic were performed for the overall number of patients and for each diagnosis or group of disorders. Data were then integrated into a GIS, enabling the mapping of patients. Results: The join-count estimate for positive spatial clustering is statistically significance for overall number of patients (p-0.001), and in specific subsets of patients regarding diagnosis, namely organic psychiatric disorders (F 00-09, n=273, p-0.001), disorders due to use of alcohol (F10, n=262), Schizophrenia, schizotypal and delusional disorders (F 20-29, n=622, p-0.001), and Bipolar disorders (F 30-31, n=428, p-0.013). However, results indicate no spatial clustering for diagnoses of depressive, anxiety, personality and substance use disorders. Mapping of these patients allowed the identification of the areas where patients are concentrated. Conclusion: Patients admitted to the hospital seem to present some degree of clustering in terms of their residence, both in general but also in specific diagnosis. These findings may help the creation of specific community programs, discussion of realistic health policies, adjusted to the local reality, and the dynamization of cost-effective initiatives that would prevent readmissions and increase the general quality of life of psychiatric patients.

No. 201

Systematic Review About Executive Function in Bulimia Nerovosa and Binge Eating Disorder

Poster Presenter: Arnaldo Cascardo Neto, M.D.
Co-Authors: Jose Carlos Appolinario, M.D., Ph.D., Walter Gonçalves, M.D.

SUMMARY:
Background: More recently, a number os evidences sugested that eating disorders characterized by the phenomenon of binge eating and purging, such as bulimia nervosa (BN) and binge eating disorder (BED) may possible represent a diagnostic category subgroup sharing the same neurobiology expressed by specific neuropsychological patterns. Objective: The main objective of this study is to review the neuropsychological investigations assessing the executive function (EF) in subjects with eating disorders with binge eating and purging (BN and BED). Methods: A systematic review of the literature was performed using the following search terms: “bulimia nervosa” or “binge eating disorder” and “executive function” or “executive dysfunction” in MEDLINE/PubMed database. The articles retrieved were screened using a predefined standardized criteria and those selected were analysed. Results: From a total of 47 articles identified, 14 studies assessing EF were included in this review, 7 in subjects with BN and 7 in patients iwht BED. Overall, these studies sugested that patients with BN showed EF abnormalities related most frequently in inhibitory control and in changing the set, and those with BED had an impact in several EF domains. Conclusion: The studies analysed in this systematic review supports that there is a executive dysfuncion in individuals with BN and BED. Besides, the evidences suggests that other factors such as comorbid conditions may impact in the worsening of the EF. However, future research should contribute with more data to clarify the relevance and impact of those abnormalitites for eating disorders characterized by binge eating and purging.

No. 202

Dasotraline for Treatment of Adults With Binge-Eating Disorder: Effect on Behavioral Outcomes

Poster Presenter: Bradford Navia
Co-Authors: James Irvin Hudson, M.D., Susan Lynn McElroy, M.D., Ling Deng, Seth Hopkins, Kenneth S. Koblan, Antony David Loebel, M.D., Robert Goldman

SUMMARY:
Background: Binge-eating disorder (BED), the most common eating disorder in the US (lifetime prevalence, 2.8%), is associated with impairment in quality of life and functioning. BED is typically associated with obsessive and dysphoric thoughts and compulsive behaviors relating to a range of eating and body image concerns. Dasotraline, a potent inhibitor of dopamine and norepinephrine transporters has a PK profile characterized by slow absorption, and a long elimination half-life (t1/2, 47-77 hours) permitting once-daily dosing. In a recent study, dasotraline demonstrated robust efficacy in treating adults with moderate-to-severe BED. We now report secondary behavioral and psychological outcomes from this study. Methods: Patients with moderate to severe BED, based on DSM-5 criteria, were randomized, double-blind, to 12 weeks of treatment with flexible doses of dasotraline (4, 6, and 8 mg/d), or placebo. The primary efficacy endpoint was number of binge eating (BE) days/week, assessed using a mixed model for repeated measures analysis. Secondary behavioral and functional outcome measures included the Yale-Brown Obsessive-Compulsive Scale Modified for Binge Eating (Y-BOCS-BE); and the Eating Disorder Examination Questionnaire Brief Version (EDE-Q7), which consists of a global score, and 3 subscale scores (dietary restraint, shape concern, and weight concern). Results: The safety population consisted of 317 patients who were randomized and received at least 1 dose of study drug (female, 84%; mean age, 38.2 years). On the primary endpoint, LS mean (SE) reduction from baseline in the number of BE days per week was significantly greater for dasotraline vs. placebo at week 12 (-3.74 [0.12] vs. -2.75 [0.12]; P<0.0001; effect size [ES] = 0.74). LS mean [SE] change from baseline to week 12 was significantly greater for the dasotraline vs. placebo on the Y-BOCS-BE total score (-17.05 [0.68] vs. -9.88 [0.65]; P<0.0001; ES, 0.96), the obsession subscale score (-8.32 [0.36] vs. -4.58 [0.34]; P<0.0001; ES, 0.95), and the compulsion subscale score (-8.69 [0.36] vs. -5.35 [0.34]; P<0.0001; ES, 0.87). LS mean [SE] change from baseline to week 12 was also significantly greater for the dasotraline vs. placebo on the EDE-Q7 global score (-0.85 [0.18] vs. -0.23 [0.11]; P<0.001; ES, 0.49), dietary restraint subscale score (-0.55 [0.15] vs. +0.15 [0.14]; P<0.001; ES, 0.44), shape concern subscale score (-0.93 [0.14] vs. -0.43 [0.13]; P=0.011; ES, 0.33), and weight concern subscale score (-1.03 [0.14] vs. -0.44 [0.14]; P<0.01; ES, 0.38). Conclusions: In this double-blind study of patients with binge eating disorder, treatment with

dasotraline (4-8 mg/d) was associated with significant improvement in behavioral and psychological outcomes, including measures of obsessions and compulsions associated with BED. In addition, significant improvement was observed in measures of weight and shape concern, and intensity of attempts to restrict food intake.

No. 203

Comorbidities Among Patients With Binge-Eating Disorder

Poster Presenter: Monica Bertoia
Co-Authors: Cynthia Bulik, William M. Spalding, M.S., Karen Yee, Judith Kando, John Seeger

SUMMARY:

Background: The burden of comorbidities among binge eating disorder (BED) patients is not well understood. Prior research has suggested a higher prevalence of certain comorbidities, such as type 2 diabetes, hypertension, and gastrointestinal disorders. Objective: To identify patients with 'likely' and 'definite' BED in a large electronic health record (EHR) database and to characterize their comorbidities. Methods: 'Likely' and 'definite' BED patients were identified using terms associated with BED that had been extracted from full text clinical notes into semi-structured fields via natural language processing (NLP). The semi-structured fields include medical concept (e.g., binge eating), note section (e.g., assessment and plan), and sentiment (e.g., deny), along with attributes. An operational algorithm to identify EHR BED used combinations of NLP fields (e.g., affirmation of binge eating + negation of bulimia) to identify groups of 'likely' and 'definite' BED patients. Comorbid conditions were characterized using EHR structured and semi-structured data during the 12 months preceding BED affirmation. Results: The EHR algorithm identified 658 'likely' and 384 'definite' BED patients between January 2009 and September 2015. Both groups of BED patients were 81% female and 87% White. 'Likely' BED patients had a mean age of 45.9 years (SD 12.8) and 'definite' BED patients 45.2 years (SD 13.4). Comorbidity patterns were similar between 'likely' and 'definite' BED patients. Among the 'definite' BED patients, 71% were overweight or obese, 46% had hyperlipidemia, 30% had diabetes type 1 or 2, and 40% had treated hypertension. The average Framingham Risk Score (10-year risk of cardiovascular disease) was 9% (SD 10%, median 5%) and the average Charlson Comorbidity Index (1-year mortality) was 1.5% (SD 2.7%, median 0%). Fifty-two percent of 'definite' BED patients had major depressive disorder, 46% had an anxiety, dissociative, or somatoform disorder, 17% had generalized anxiety disorder, 10% had dysthymia, 8% had bipolar disorder, 7% had attention deficit hyperactivity disorder 6% had post-traumatic stress disorder, and less than 5% had obsessive compulsive disorder, body dysmorphic disorder, or social anxiety disorder. Medical comorbidities included 23% with gastroesophageal reflux, 8% with migraines, 7% with constipation, and less than 5% with irritable bowel syndrome, polyps, diverticulitis, major gastrointestinal bleed, ulcer, Barrett's esophagus, or ulcerative colitis. Conclusion: Patients with BED have a high prevalence of both somatic and psychiatric comorbidities, particularly overweight status along with hypertension, hyperlipidemia, depression, and anxiety. Future work should address whether early detection and successful intervention for BED can reduce comorbid illnesses and associated health care utilization. This study was supported by Shire.

No. 204

Treatment Characteristics of Patients With Binge-Eating Disorder

Poster Presenter: William M. Spalding, M.S.
Co-Authors: Monica Bertoia, Karen Yee, Judith Kando, Cynthia Bulik, John Seeger

SUMMARY:

Background: Current treatment guidelines and practice for binge eating disorder (BED) focus on cognitive behavioral therapy (CBT) and interpersonal psychotherapy (IPT). Although lisdexamfetamine is indicated for BED, pharmacotherapy, when applied, chiefly consists of antidepressants and antipsychotics. Understanding current treatment patterns may identify common gaps in BED treatment. Objective: To characterize real-world treatment patterns of patients with BED identified in a large EHR database. Methods: Patients with BED were identified using natural language processing (NLP) of clinical notes within the EHR database. Full text notes were extracted into unique NLP fields

such as concept (e.g., binge eating), note section (e.g., history of present illness), fact type (e.g., symptom), modifiers (e.g., chronic), and sentiment (e.g., deny). Algorithms applied to the EHR used combinations of NLP fields to identify 'likely' and 'definite' BED patients. NLP concepts such as "cognitive therapy" and "behavioral therapy" were used to identify subcategories of psychotherapy. Structured data within the EHR database were used to characterize pharmacotherapy. Treatment characteristics were described during the 12 months prior to the date of BED affirmation. Results: There were 658 'likely' BED patients (with NLP affirmation of BED) between January 2009 and September 2015. An additional 384 patients were classified as 'definite' BED who met more stringent criteria. These patients were 81% female and 87% White. 'Likely' BED patients had a mean age of 46 years (SD 13) and 'definite' BED patients 45 years (SD 13). Treatment patterns were similar among those with 'likely' and 'definite' BED. Among 'definite' BED patients, 39% were taking selective serotonin re-uptake inhibitors, 21% atypical antidepressants, 13% serotonin modulators, 3% tricyclics/tetracyclics, 19% Bupropion, 24% amphetamine-like stimulants, 2% non-amphetamine-like stimulants, 18% anticonvulsants, and 14% antiobesity agents. Less than 1% of patients were taking serotonin-norepinephrine reuptake inhibitors or monamine oxidase inhibitors, while 71% were taking any of the listed medications. 'Definite' BED patients had an average of 1 (SD 6) psychotherapy visit over the 12-month observation period (median 2, 75th percentile 6). Many were noted as either having or discussing the following types of therapy: 13% CBT, 18% behavior therapy, 34% nonspecific therapy, and 17% group therapy. No NLP terms were specific to IPT or behavioral weight loss. Conclusion: While CBT is the gold-standard treatment for BED, these data suggest that few patients were participating in CBT in the 12 months preceding BED affirmation. Among the BED patients treated with pharmaceuticals, few were treated with lisdexamfetamine, the only drug indicated for BED. However, the lisdexamfetamine approval period only overlapped with the last 9 months of the study (30 January 2015 to 30 September 2015). This study was supported by Shire.

No. 205

Obsessive-Compulsive Symptom Accomodation and Parental Psychopathology

Poster Presenter: Aline Sampaio, M.D., Ph.D.
Co-Authors: Lucas Quarantini, M.D., Ph.D., Igor Dorea Bandeira, M.D., Victor Oliveira, M.D., Samantha Siqueira da Silva, M.D.

SUMMARY:
Family accommodation is a series of changes in family behavior which aims to reduce patient's anxiety due to obsessive-compulsive symptoms, but that ends helping evasion of compulsive symptoms (Wu, 2016). High family accommodation is associated with higher obsessive-compulsive disorder (OCD) severity, functional impairment and treatment resistance (Stewart SE, 2017). Little is known about psychopathological factors associated with parental accommodation. In this study, parents of 150 OCD patients were interviewed using Structured Clinical Interview for DSM (SCID) (First et al, 2002) and the DSM-IV criteria for ADHD adapted from Schedule for Affective Disorders and Schizophrenia for School Aged Children Present and Lifetime Version (Kiddie-SADS-PL) (Kaufman et al, 1996) and also completed Yale-Brown obsessive-compulsive scale (YBOCS)(Goodman et al., 1989). Family accommodation was evaluated with Family accommodation scale for obsessive-compulsive disorder (FAS-IR) (Calvocoressi et al, 1999). All participants gave their informed consent. Results from 218 participants were analyzed. Family accommodation was not associated with ADHD or OCD in parents. Higher family accommodation was not associated with parents` YBOCS score but that had a direct relation with higher OCD proband`s YBOCS score. The association between high family accommodation and high YBOCS score in probands is supported by other studies (Stewart et al, 2017). It is possible that the mild to moderate OCD could be hidden from family and the severe OCD have more influence in family routine, requiring accommodation. Parental psychopathology does not seem to influence family accommodation. Larger studies are required in order to explore the behaviors that lead to family accommodation.

No. 206

Difficulties in the Management of Eurotophobia in a Young Male

Poster Presenter: Charlotte Iroghama Nwigwe

SUMMARY:
Eurotophobia is an irrational fear of the female genitalia. The rare nature of this phobia makes it particularly challenging. Furthermore, for those who are romantically interested in women, like the case below, this condition is debilitating. Mr A. is a 27 year old single male who was referred by the general practitioner to the outpatient clinic with complaints of fear and discomfort when exposed to the female external genitalia. The patient had been raised in a very strict Christian family where issues of sexuality were never discussed. His sexual orientation has always been towards females and he began to watch pornography and engage in masturbation at the age of 18 years. He had his first sexual encounter with a female at the age of 26 years and discovered that he was scared, anxious and disgusted at the sight of the genitalia despite the fact that he was comfortable with other body parts. This affected his sexual encounters and his interaction with females. He therefore avoided women but continued to engage in pornography and masturbation. He was not happy about this situation and began to worry a lot about it. He tried to visit brothels and strip clubs to get himself used to female genitalia but his anxiety and fear only increased. He was commenced on cognitive behavioral therapy which helped him understand the nature of his phobia. But he was not willing to go on with graded exposure to his fears through pictures of the female genitalia. The patient was eventually commenced on a selective serotonin reuptake inhibitor and reported gradual improvement and willingness to engage in intimate relationships with the opposite sex. He desires to get married someday and hopes he will find a spouse who would encourage him. There is a paucity of research into this condition and without thorough history such patients may easily be termed as being homosexual hence depriving them of intervention.

No. 207
Comprehensive Assessment of Executive Functions in Borderline Personality Disorder
Poster Presenter: Jacob Koudys
Co-Author: Anthony Ruocco

SUMMARY:
BACKGROUND: Borderline personality disorder (BPD) is a psychiatric disorder characterized by difficulties with emotion regulation and impulsivity. Taken together, these difficulties can be interpreted as compromised self-regulation, a construct subserved by executive functions (EF). Prior research suggests that EF deficits predominate the neurocognitive profile of BPD, but the majority of these studies have been small in size, noncomprehensive in their assessments of EF, and liberal with inclusion criteria. METHOD: Individuals with BPD (n = 80) and healthy controls (n = 83) matched on age and sex underwent psychiatric diagnostic interviewing and completed a battery of neuropsychological tests: Delis-Kaplan Executive Function System (D-KEFS) Tower Test, D-KEFS Color Word Interference Test, Digit Span, and Conners Performance Test (CPT). Participants with invalid scores on the Victoria Symptom Validity Test or with positive urine toxicology screens were excluded. Exclusions also included past or present substance use disorder, psychosis, bipolar I disorder, or brain injury beyond mild severity. Response inhibition was measured by the number of commission errors on the CPT and by scores on the Inhibition condition of the Color Word Interference Test; cognitive flexibility/switching was measured by scores on the Switching condition of the Color Word Interference Test; planning was measured by first-move time on the Tower Test; working memory was measured by Digit Span Total score; and problem-solving efficiency was measured by move-accuracy ratio on the Tower Test. RESULTS: Analyses of age-corrected standard scores revealed that individuals with BPD took significantly longer on the Switching condition of the Color Word Interference Test ($p = .004$). In regard to the magnitude of differences between groups, all differences were of small effect size ($d = 0.20$-0.28) except for the Colour Word Switching condition which was of moderate effect size ($d = 0.45$). CONCLUSIONS: Magnitudes of these EF differences emphasize the importance of focusing on the underlying role of cognitive flexibility—as opposed to working memory and response inhibition—to understand self-regulation deficits in BPD. Moreover, aspects of planning and problem-solving do not appear to play a substantial role in the disorder. The strict exclusion criteria and large group size in this study contribute to clarifying specific EF deficits in the neurocognitive profile of BPD.

No. 208

Longitudinal Description and Prediction of Smoking Among Borderline Patients: A 14-Year Follow-Up Study

Poster Presenter: Marcelo Jose Abduch Adas Branas, M.D.

SUMMARY:

Objective: Personality disorders and substance use disorders frequently co-occur. Tobacco use is one of them and is associated with various physical illnesses. The objectives of this study are to describe the longitudinal course of smoking in patients with borderline personality disorder (BPD) in a well-defined sample over 14 years of follow-up, to compare recovered and non-recovered individuals, and to assess baseline predictors of tobacco. Methods: 264 borderline patients and 63 patients with other personality disorders were interviewed concerning their physical health at 6-year follow-up in a longitudinal study of the course of BPD (McLean Study of Adult Development) and re-interviewed 7 times at two-year intervals over the next fourteen years, from 1998 to 2012. At the beginning, all subjects were inpatients and between 18 and 35 years of age. Recovery was defined as concurrent remission from BPD, at least one emotionally sustaining relationship, and a good full-time vocational adjustment. Results: Borderline and other personality disorder patients had a significant decrease in their smoking rates over time. Non-recovered patients had significant higher prevalence of smoking than recovered patients over time. Alcohol abuse/dependence, 14 years of education or less and the presence of denial as a mechanism of defense were significant predictors of smoking in borderline patients in multivariate analyses. Conclusions: Taken together, the results of this study suggest that recovery status is an important element in the prevalence of smoking among borderline patients over time. They also suggest that smoking is predicted by three factors: a baseline history of alcohol abuse, a low level of education, and an inability to accept the facts about the negative health outcomes associated with smoking. By virtue of borderline personality disorder being very common in most psychiatric settings, proper treatment of this disorder and addressing smoking in this population are of clinical importance.

No. 209

The Relationship Between Psychiatric Morbidity and Severe Obesity: A Case Control Study

Poster Presenter: Marja Koski, M.D.

SUMMARY:

Background: Obesity is global problem in the world.The participants sample of this study consisted of all the individuals living in southern Finland receiving a permanent disability pension primarily due to obesity. 152 individuals met these criteria. Methods:The controls were matched with the subject group according to place of residence ,sex ,age, time of pension granting, and occupation. The controls were selected by random sampling. The male and female controls were selected separately using the random sampling. Three controls were selected for each female subject five controls for each male subject. The study enlisted 510 persons, of whom 112 were subjects and 398 were controls. The statistical methods used in this study included ?2-tests, t-tests and conditional logistic linear models. These two groups were then compared using t-test for paired variables. The risk ratios and upper and lower confidence limits were calculated for parameters that remained significant in the conditional logistic linear analysis .The author of this paper interviewed all individuals. Results: At the time of personal examination, the mean weight of the subjects was 106.2 kg the controls 72.3 kg. On Axes I of the subjects, 87% finds a psychiatric diagnosis. On-Axis-II the most common personality diagnoses is a mixed diagnosis or a diagnosis showing characteristics of several personality diagnoses. This diagnosis accounted for 68% of all cases of personality disorder. Schizoid personality, occur 21% among the subject group and 25% among the control group. Among individuals of severe obesity, a borderline personality statistically significantly increased the risk of being granted a disability pension. No anxiety disturbances were detected in any of the subjects; but such disturbance was detected in 5% of the controls. Depression was diagnosed more in the subject group than in the control group. Based on the conditional logistic linear model, individuals with severe obesity have a

higher risk for becoming depressed than the persons on the control group. In Beck depression inventory, we found that subject group suffered more on depression. Seven percent of the subjects had masked depression. Nearly statistically significance found on the questions which measures irritability, indecisiveness, and body-image and on the question, ability to work. Regarding weight changes on BDI-scale, on both weight loss and weight gain, found statistically significant finding. Conclusions: We believe that we have given new and needed overview from the relationship of psychiatric morbidity and severe obesity that this study provides encouraging possibilities for research on the potential health effects of severe obesity and its development.

No. 210

Self-Medicated Anxiety in a Transgendered Patient Leading to Psychosis

Poster Presenter: Ramya Tadipatri
Co-Authors: Joachim Benitez, Dimitry Francois, M.D.

SUMMARY:

Mr. M is a 27-year-old female-to-male (FTM) transgender person who was admitted for worsening auditory hallucinations. He had been using marijuana recreationally for several years, but a month prior to admission, he drastically increased his usage. This was in an effort to self-medicate his increasing anxiety following transition 2 years prior with testosterone injections and mastectomy. The anxiety was accompanied by OCD symptoms including compulsive handwashing, checking, arranging, and rituals, as well as panic attacks that were characterized by palpitations, hyperventilation, feeling of impending doom, and shaking. Following the increase in marijuana use, he began hearing voices that were initially harmless whispers but then became progressively louder and more threatening. He became increasingly paranoid with increasing anxiety and panic attacks. The team considered the differential diagnosis of schizophrenia spectrum disorder and substance-induced psychotic disorder secondary to cannabis and/or testosterone. During the hospital course, Mr. M was treated with clonazepam and risperidone, later switched to olanzapine, and symptoms subsided. Gender dysphoria, identification with the opposite gender, can be very distressing and is associated with high comorbid rates of anxiety and depression. Several studies have shown that transitioning may reduce anxiety in these individuals. Despite the benefits of transitioning, there are many psychosocial challenges that may arise during the process. Although there are guidelines in place to ensure adequate screening and support, stigma surrounding both psychiatric and gender issues may be preventing some from receiving appropriate care. In this poster, we hope to highlight the importance of these guidelines while exploring the possible etiologies of this patient's psychosis.

No. 211

The Third Sex: Is It an Illness or a Part of Our Society?

Poster Presenter: Prasad Rao Gundugurti, M.B.B.S.
Co-Author: Sonal Rai

SUMMARY:

Gender identity disorder is a condition characterized by a persistent feeling of discomfort or inappropriateness concerning one's anatomic sex. The disorder typically begins in childhood with gender identity problems and is manifested in adolescence or adulthood by a person dressing in clothing appropriate for the desired gender, as opposed to one's birth gender. In extreme cases, persons with gender identity disorder may seek gender reassignment surgery, also known as a sex-change operation. The controversy over here is that is it a disease, a choice, or state. This is a series of 10 cases about gender dysphoria depicting the condition, presentation, hurdles and stigma from the society. In the 10-case studied over we could identify certain common factors and unique points which area of interest. in these 10 cases it was noticed that these ppl faced a lot of resistance both from the society and family to express true self. All had to leave their families and live separately, their families disowned them, some even lost their job for this issue. But there were certain factors lime family education, social status, societal norms and policies, employment and education factors which help them in leading a normal life and be their self.

Poster Session 8

No. 1

Book Club: A Valuable Addition to Formal Didactic Curriculum

Poster Presenter: Tiffany Prout DeHondt, M.D.

SUMMARY:

Objectives: As knowledge about psychiatric conditions and therapeutic strategies advances, training programs face challenges incorporating additional content into yearly academic curriculum. In traditional curriculum models, antiquated teaching strategies may repress learning and disengage residents (1). In learning methods that do not engage residents, critical appraisal skills can become limited. (2). In addition, resident physicians are at great risk of burnout due to the number of hours worked and the increasing body of clinical knowledge to master (3). Concerns about burnout and long-term retention of didactic material bring forth the goal to incorporate novel pedagogical methods that advance medical knowledge as well as resident wellness. With that goal in mind, our residency program added a monthly book club to the formal didactic curriculum. Methods: Residents elected 2 co-chairs of the book club, and program faculty worked with the book club co-chairs to finalize books for monthly discussion based on the curricular needs and suggestions from residents and teaching faculty. Results: Brain on Fire and Concussion were selected to address curricular needs in neurosciences while also supplementing the professionalism and ethics course series. A Test of Will and Curious Incident of a Dog in the Night-time were selected to help reinforce the curricula in growth and development. Being Mortal helped address issues related to palliative medicine. Finally, Before I Forget gave insight into the courage and vulnerability of caring for someone with Alzheimer's disease. The series was well received, and both the quantitative as well as the qualitative evaluations from residents were positive. In response to the evaluation question: Did the material provide needs based education for physicians to improve knowledge and competence? The average response was 5 on a scale of 0 to 5; on the item addressing whether the discussion was case-based addressing practical problems, the average response was 4.38. Additionally, the qualitative feedback was positive for increased appreciation of the "patient experience", development of "empathy", importance of "reflective listening", and resident "engagement" in a group learning activity. Conclusions: A well-planned book club, can potentially provide a platform not only for enhancing medical knowledge, but can help develop competency in empathic listening, system based issues, and ethics & professionalism. This may also assist with reigniting passion for self-directed learning in a group based interactive format while promoting group cohesion.

No. 2

A Critique of Biological Rhetoric in Psychiatric Education

Poster Presenter: Zachary Hammond Schwartz
Co-Author: Juliet Silberstein

SUMMARY:

Biological data (fMRI, biomarkers, etc.) serve many purposes in psychiatric education, from explaining pharmacologic treatments to identifying overlap with other medical specialties. Yet biological data are often employed to serve another important task as well: persuading medical students that psychiatric diseases are just as legitimate and "real" as those treated by surgeons and internists. There are clear historical reasons for this task. At least since Thomas Szasz declared, in the 1960s, that mental illness is no more real than witchcraft, psychiatry has felt the need to publicly defend its scientific status. This task takes on special importance in medical education, since most students are proud of modern medicine's triumph over the quackery of earlier centuries. Nevertheless, we will here critique this reflexive use of biologic rhetoric in psychiatric education. Our critique is based on three philosophical arguments (these are [1] the problem of delineating sickness and health, [2] the mind-body problem as it relates to psychiatry, [3] the problem of free will/determinism as it relates to psychiatry) as well as an appeal to recent empirical data about the questionable benefit of biological rhetoric in eradicating psychiatric stigma. Our intention is not to cast doubt on the "reality" of mental disorder; nor do we wish to disregard the massive benefits that have come from the biological study of mental disorder. Our point is that well-intentioned but unthinking use of biological rhetoric can obscure

some of the genuine conceptual difficulties inherent to psychiatry, and this risks alienating those critically-minded students whom the field needs most. Ultimately, we hope that this kind of critique will help clear the ground for developing an effective and philosophically nuanced educational platform.

No. 3

NIMH Support for Academic and Research Psychiatry Careers: 30 Year Outcomes for the Outstanding Resident Award Program

Poster Presenter: Margaret Rose Mahoney
Co-Authors: Jarrod Smith, Joyce Y. Chung, M.D.

SUMMARY:

Background: The National Institute of Mental Health (NIMH) is the largest source of federal funding for mental health research. At the same time, NIMH has funded initiatives to train the next generation of leaders in academic psychiatry. The Outstanding Resident Award Program (ORAP), which marks its 30th cohort of award recipients this year, is sponsored by the NIMH Intramural Research program and is a notable example of a longstanding commitment to identify and recognize young and promising research psychiatrists. **Methods:** Demographic and career information about ORAP recipients, psychiatry residents in their second postgraduate year of training (PGY2), over the past thirty years was collected through internal records and Internet searches. Demographic data about gender, professional degrees, and residency program at baseline was supplemented by subsequent career information in terms of current employment, institution and achievements. A systematic search was carried out using NIH RePORTER to identify federal funding at the individual level. Finally, results were grouped by decades (3 cohorts) to examine trends in demographic, career outcomes, and funding. **Results:** A total of 385 psychiatry residents have received ORAP, with an average of 12.8 per year. Trends over time [Decade 1 (1988–1997), Decade 2 (1998–2007), Decade 3 (2008–2017)] include increasing rates of: female recipients (27.9%, 31.8%, 32.8%), MD-PhD degrees (40.7%, 61.2%, 79.3%), and federal research support as a Principal Investigator (37.9%, 47.7%, 52.3%). The type of grant received, e.g., K or R grants, appears to follow the typical timeline of a physician-scientist career, with greater numbers of R awards in the later decades. Other important outcomes of ORAP recipients include leadership roles within academic departments, e.g., department chairs, and executive positions in the pharmaceutical industry. Psychiatry residency programs that receive NIMH R25 funding are more likely to yield ORAP recipients than those without. **Conclusions:** Analysis of data about ORAP recipients provides a window into possible trends in who chooses to enter psychiatry and their success in pursuing research. Not all ORAP recipients are currently involved in full-time research, but our data demonstrate multiple career trajectories in which they contribute to psychiatry through positions in administration, industry, and mentoring/training.

No. 4

Generalized Edema Secondary to Naloxone: A Case Report

Poster Presenter: Boski Patel, M.D.

SUMMARY:

It is well known that opiate agonists can cause generalized edema. However opiate antagonists, such as naloxone, are not known to cause generalized body edema. Naloxone has been reported to cause pulmonary edema through increase in catecholamine release leading to increase in pulmonary pressure. However, the mechanism through which it might cause generalized edema is unknown. Ms. B is a 23-year-old Caucasian female with a past psychiatric history of alcohol use, opiate use, depression, and anxiety who presented for dual diagnosis intensive outpatient program after being detoxed from opiates and put on maintenance suboxone (buprenorphine + naloxone combination). After 10 days, she started exhibiting anasarca, most prominent in her feet and hands. She complained of generalized muscle aches, skin tenderness, and weight gain. No breathing difficulties were noted. Her PCP completed CBC, Basic Metabolic Profile, TSH, and LFTs which were within normal limits. Vitals were stable. PCP noted that patient may have low protein due to her history of alcohol use, even though serum albumin levels were within normal limits, and her PCP recommended she start furosemide which had little effect. Ms. B's other

current medications included gabapentin and escitalopram. Although gabapentin is known to cause edema, she had been on it for at least one year prior to presentation without any side effects. It was noted that the only new medication was suboxone. Although there are few case reports linking suboxone to edema, the staff at a large local suboxone clinic empirically reported witnessing edema as side effect of naloxone. The dual-diagnosis treatment team decided to stop her suboxone and continue with buprenorphine. Although buprenorphine if used appropriately can be effective as an agonist therapy for opioid addiction, it carries an increased abuse potential when formulated without naloxone. Therefore, multiple family meetings were held to enhance treatment adherence. The team recruited patient's father who was invested in getting his daughter sober.

No. 5

CANABIC, CANnabis, and Adolescents—a Brief Intervention to Reduce Their Consumption: A Cluster Randomized Controlled Trial in Primary Care

Poster Presenter: Catherine Laporte
Co-Authors: Bruno Pereira, Olivier Blanc, Sherazade Kinouani, Benedicte Eschalier, Pierre Michel Llorca, Georges Brousse, Philippe Vorilhon

SUMMARY:
Purpose: Cannabis is the first illegal substance used by young people worldwide. The major acute effect of consumption is the risk taking: driving a vehicle, and unprotected sex after having consumed. Chronic use is associated with ENT and pneumological cancers, cardiovascular risk, and over-risk of psychiatric disorders. During adolescence, cannabis use causes cerebral microstructural changes, which are not always reversible and are the cause of cognitive and psychiatric disorders. More evidence is needed regarding the efficacy of a brief intervention (BI) to reduce cannabis use, because this promising technique could be adapted for use in primary care. This study aimed to test the efficacy of a BI conducted by a general practitioner (GP) on cannabis users aged 15–25 years. Method: We performed a cluster randomized controlled trial with two conditions conducted by 77 GPs in France. The intervention was an interview designed according to the FRAMES (feedback, responsibility, advice, menu, empathy, self-efficacy) model. In the IG, we trained the GPs to make BI. In the CG, they received a briefing on the study. All GPs had then 1 year to include the first five eligible patients that they consulted, regardless of the reason for the consultation. All users aged 15–25 years, who had consumed at least one joint per month for at least 1 year, were eligible for inclusion in the study. Results: The GPs screened and followed up 262 young cannabis users (IG : 141, CG : 121). After 1 year, cannabis use in the intervention group (IG) decreased from 30 [6-80] to 17.5 [2-60] and that in the control group (CG) decreased from 20 [5-40] to 17.5 [4-40]. The study did not show any statistically significant results between the two groups after 1 year: p = 0.13. But non-daily users smoked less in the IG (3 [0–15] versus 10 [3–30] joints per month; p = 0.01). After 6 months, there was a difference in the variation in the number of joints (-33.3% [- 62.5–0] in the IG versus 0% [-50–88.9] in the CG, p = 0.01) and users aged under 18 years smoked less in the IG (12.5 [1–30] versus 20 [12–60] joints per month, p = 0.04). Conclusions: Our study did not show a global effect on cannabis use of a BI conducted by GPs on French young cannabis users. However, our study strongly encourages GPs to perform a BI on younger and moderate users. This first RCT in France about cannabis use has also allowed an understanding of the complexity of the approach to the cannabis use in primary care. The structuring of research on primary care is complex and requires methodological reflection that is essential for all future projects. The dangers of cannabis are such that it is necessary to continue to encourage further work on this topic in order to understand the behaviors of consumers and improve care regimes. Trial registration: Clinicaltrials.gov Identifier: NCT01433692

No. 6
WITHDRAWN

No. 7
WITHDRAWN

No. 8

Could an Over the Counter Drug Prevent Topiramate-Induced Cognitive Side Effects?

Poster Presenter: Sana Sharma
Co-Authors: Derek M. Blevins, M.D., Christopher

Holstege, Nassima Ait-Daoud, M.D.

SUMMARY:
Topiramate (TPM) an antiepileptic drug reduces the frequency of activation of voltage-sensitive sodium channels. It also potentiates GABA-mediated neurotransmission through an interaction with the GABA(A) receptors and inhibits neuronal excitatory pathways through a selective action at the AMPA and kainate subtypes of glutamate receptors(1,2). It has a strong record for effectiveness in alcohol clinical trials but its use has been limited because of its negative impact on cognition and verbal fluency(3). TPM induced cognitive impairment is believed to be caused by increased oxidative stress due to lack of critical intracellular antioxidant, glutathione. An animal model study showed that TPM causes this oxidative stress by increasing lipid peroxidation and decreasing glutathione levels(4). Glutathione synthesis requires cysteine as a substrate, which in turn requires cystine-glutamate antiporter for transport into neurons and glia(5). N-acetyl cysteine (NAC), an FDA approved drug for "acetaminophen poisoning" seems to increase plasma cysteine levels, therefore increasing plasma glutathione(6). Combining NAC with TPM could potentially reduce the oxidative stress and possibly decrease cognitive side effects as a result. Additionally, NAC transports excessive glutamate from the extrasynaptic space into glial cells via the glutamate transporter (GLT-1), which could potentiate the glutamate modulation achieved by TPM in alcohol use disorder treatment (AUD)(7). Hypothesis: Combination of topiramate and N-acetyl cysteine could act synergistically in individuals with AUD to improve TPM's efficacy in alcohol treatment outcome and to prevent cognitive adverse event profile associated with TPM use. We plan to test the hypotheses that: 1. Combining TPM and NAC will be associated with better cognitive adverse event profile than using TPM alone 2. Combining TPM and NAC will be associated with greater reduction in drinks per day and alcohol craving Method: Twelve week, randomized, double-blind outpatient trial involving 16 individuals with AUD. Participants are randomized to receive TPM 200mg/day +NAC 600 mg bid or TPM 200 mg/day + matching placebo and weekly medication management to assess for adverse events and treatment outcomes Summary: Topiramate decreases alcohol use in AUD individuals and has a moderate range therapeutic effect (1,8-11). Despite its efficacy, the widespread use of topiramate is hindered by its negative cognitive profile Cognitive impairment associated with TPM was found to be dose-dependent with statistically significant effects starting at 192 mg/day within 6 weeks of treatment ($p < 0.01$)(12). Our study intends to compare a novel combination of TPM with NAC versus TPM alone in alcohol treatment outcome metrics and safety profile.

No. 9

Association Between Mental Disorders and Cigarette Smoking: Using the Survey of Mental Disorders in Korea

Poster Presenter: Sungwon Roh, M.D., Ph.D.
Co-Authors: Jung Ah Lee, Hong-Jun Cho

SUMMARY:
Background: People with mental disorders have higher smoking prevalence, and less success in stopping smoking compared with the general population. The objective of this study is to investigate smoking rate, quit ratio, and association between mental disorders and cigarette smoking in a nationwide sample of Korean adults. **Methods:** We analyzed the data using the survey of mental disorders in Korea including 5,101 persons aged 18 and above which was done from April through November, 2016. In this survey, the Korean version of the Composite International Diagnostic Interview (K-CIDI) was used as a diagnostic tool which is based on the *DSM-IV* criteria. Ever smokers were defined as smokers who have smoked every day for more than 1 month, and current smokers were defined as smokers who have smoked in the last 6 months among ever smokers. **Results:** The prevalence rate of all types of *DSM-IV* mental disorders was 22.1%, (male 23.8%, female 20.4%). The lifetime smoking rate was 24.7% (male 44.2%, female 5.3%), and the current smoking rate was 16.0% (male 28.8%, female 3.5%). The current smoking rate of people with lifetime mental disorders was 23.0% (male 38.3%, female 5.4%) which is higher than people without mental disorders (total 14.0%, male 25.8%, female 3.0%). The quit ratio was not different between people with and without mental disorders (0.38 vs 0.34). The odds ratio for current smoking in

individuals with lifetime mental disorders was 1.81 (95% CI [1.46, 2.23]) compared with individuals without mental disorders after adjusting for age, gender, and socioeconomic status in logistic regression analyses. In addition, the odds ratio was 1.36 when excluding alcohol use disorders (95% CI [1.02, 1.80]). **Conclusion:** People with mental disorders smoke with greater prevalence than those without mental disorders even when excluding alcohol use disorders. The quit ratio of people with mental disorders was not different from that of the general population, suggesting that mentally ill patients quit smoking not harder than those without mental disorders. Given that smoking is a major health concern, psychiatric and primary care providers should have interest in smoking and provide optimal treatment for smoking cessation for patients with mental disorders.

No. 10

Prescribed and Illicit Benzodiazepine Use in Methadone Maintenance Treatment

Poster Presenter: Tea Rosic, M.D.

SUMMARY:

Objective: North America currently faces an unprecedented crisis of opioid use disorder (OUD) and opioid-related deaths. Polysubstance use is a major risk factor for opioid overdose and death. Of particular concern are benzodiazepines (BZD), medications commonly prescribed by physicians during methadone maintenance treatment (MMT) but also illicitly used by patients. BZD can be important in the short-term treatment of anxiety and insomnia, symptoms that are highly prevalent in individuals with OUD, and may be secondary to addiction or a comorbid psychiatric disorder predating OUD. Most clinical guidelines on MMT recommend no use of BZD during treatment. BZD use disorder has known association with worse MMT outcomes, and may increase mortality risk. This prospective cohort study examines the association between prescribed and illicit BZD use (BZU) and continued illicit opioid use (CIOU) in patients receiving MMT. Hypothesis: Both prescribed and illicit BZU is associated with increased CIOU. Methodology: Data were collected from 1,387 patients receiving outpatient MMT in Southern-Ontario, Canada from 2011-2016, including urine screening for benzodiazepines and illicit opioids. Participants provided demographic and clinical information at time of study enrollment and completed standardized psychiatric screening interviews. The main outcome was percentage of illicit opioid-positive urine screens for 6 months. Urine screens positive for illicit opioids suggest worse outcome in treatment due to ongoing substance use. Using linear regression analysis, we examined associations between prescribed and illicit BZD and CIOU. Using logistic regression analysis, we examined clinical factors associated with prescribed and illicit BZU. Results: A fifth (22%) of participants reported prescribed BZU, while 42.25% had illicit BZU, as evidenced by having no prescription and minimum one benzodiazepine-positive urine screen. There was no association between illicit BZU and age, sex, comorbid anxiety disorder, or antidepressant treatment. Prescribed BZU is associated with having a comorbid anxiety disorder ($OR = 2.02$, $p < 0.001$), antidepressant treatment ($OR = 3.04$), and longer duration in MMT ($OR = 1.01$, $p = 0.001$). Illicit BZU was associated with significantly increased CIOU ($B = 12.97$, $p = 0.01$) while prescribed BZU was associated with decreased CIOU ($B = -3.97$, $p = 0.03$). Conclusion: These results suggest that illicit BZU is associated with worse MMT outcome while prescribed BZU is associated with better outcome with respect to ongoing illicit opioid use. The findings invoke important discussion on when benzodiazepines can be safely used in MMT. This study was supported by the Peter Boris Centre for Addictions Research and the Chanchlani Research Center at McMaster University.

No. 11

Effectiveness of Recruitment Strategies for an Alcohol Moderation Trial

Poster Presenter: Rachel Vitale

Co-Authors: Danusha Selva Kumar, Nehal Vadhan, Anna Jadanova, Svetlana Levak, Kaerensa Craft, George Nitzburg, Jonathan Morgenstern

SUMMARY:

Background: The purpose of this study was to explore various advertising initiatives in terms of their effectiveness in yielding enrollees on participant recruitment in a nationwide behavioral clinical trial for moderation of problem drinking.

Method: We examined recruitment quantities and sample characteristics (i.e., age, gender, ethnicity, race, and state of residence) as a function of participants' self-reported advertising source (e.g., Internet search/advertisement, dedicated website, radio) over 18 months of recruitment. We also examined recruitment rate and efficiency as a function of the timing of specific advertising initiatives in terms of: 1) prospective participants who inquired about the study ("inquiries"), 2) prospective participants remotely interviewed ("screens"), and 3) enrolled participants ("enrollees"). Results: Overall the study received 486 inquiries, completed 261 screens, and accepted 105 enrollees to date. Of these enrollees, 30.4% participated in person while the remaining participated remotely via televideo. The sample was primarily Caucasian (89.5%), female (73%), middle-aged (mean age = 49.8 [SD = 12.6], range = 21 – 73), and well-educated with 74.3% having received a Bachelor's degree of higher. Participants reported recruitment via an advertisement on an alcohol moderation website (Moderation.org; 32.1 %), Google AdWords (29.4%), internal hospital system advertisements/notifications (e.g., Northwell Health Intranet postings, employee email bulletins; 7.3%), print and electronic magazine advertisements (5.5%), and other sources (18.4% from multiple sources and 7.3% from unknown). Within this sample, Google AdWords yielded significantly younger participants (M = 44.5; SD = 11.5) relative to other sources (M = 53.9; SD = 12.6), but it was not significantly different from Moderation.org (M = 49.1; SD = 11.5), $F(2, 106) = 5.7$, $p < .05$. There were no significant differences between these three sources on gender, ethnicity, race, or state of residence. The study had an average of 25 inquiries, 14 screens, and 5 enrollees per month. The biggest spikes in recruitment (44 inquiries, 33 screens, and 11 enrollees) occurred during the onset month of the magazine campaign, and in the three months following the onset of the Google AdWords campaign (average of 28 inquiries, 17 screens, and 6 enrollees per month). During the time in which Google AdWords and Moderation.org were running concurrently, Google AdWords accomplished similar yield to Moderation.org, but in half the time. Conclusions: National recruitment for an alcohol moderation trial physically located in suburban New York resulted in a largely older Caucasian, female sample. The Internet yielded the majority of the sample with Google AdWords yielding a relatively younger sample than other forms. Addition of recruitment initiatives may immediately, but temporarily increase recruitment.

No. 12

Association Between Mutual-Help Groups and Abstinence Among Prescription Opioid Dependent Patients During 42-Month Post-Treatment Follow-Up

Poster Presenter: Roger Douglas Weiss, M.D.

SUMMARY:

Background: In the multi-site CTN Prescription Opioid Addiction Treatment Study (POATS), participants receiving agonist treatment had significantly better opioid use outcomes during the main trial and at 18-, 30-, and 42-month follow-up. However, many participants abstained from opioids during the month prior to the month 18 (37%) and 42 (50%) assessments, respectively, far higher than in the main trial (<10%); 80% of those in agonist treatment abstained at months 18 and 42. This exploratory analysis examined factors related to successful outcomes in those not receiving agonist treatment. Methods: A total of 338 of 653 original POATS participants also participated in the Long-term Follow-up Study, which consisted of 45-60 minute telephone interviews by McLean Hospital staff at months 18, 30, and 42 post-randomization. Results: At each follow-up assessment, at least half of the study participants self-reported opioid abstinence (50-64%) in the past month, regardless of whether or not they were currently in treatment for opioid use disorder. Most (61-66%) reported treatment for opioid use disorder in the past month; for example, at month 18, 32% were in opioid agonist treatment, 23% were attending mutual-help groups, and 13% were in outpatient counseling. The association between mutual-help attendance and opioid abstinence varied by opioid agonist treatment: among those not in opioid agonist treatment, mutual-help attendance was significantly associated with opioid abstinence (?2(1)=4.98-5.78, p values=.02-.03 at the 3 follow-up assessments); however, among those in opioid agonist treatment, mutual-help attendance was not associated with

opioid abstinence (?2(1)=0.28-1.75, p values=.18-.59 at the 3 follow-up assessments). Conclusions: It was common for patients to seek agonist treatment at the conclusion of the treatment trial, and those in agonist treatment were more likely to be opioid-abstinent at long-term follow-up. Mutual-help attendance appeared to be associated with opioid abstinence, but that association was statistically significant only in the absence of opioid agonist treatment.

No. 13

The Relationship Between Childhood Abuse, Substance Use, and Psychosis

Poster Presenter: Samantha Jankowski
Co-Authors: Sharron Spriggs, M.A., Anahita Bassirnia, M.D., Charles A. Perkel, M.D., Igor I. Galynker, M.D., Ph.D., Yasmin Hurd, Ph.D.

SUMMARY:
Introduction: Due to the heterogeneous nature of psychosis, it has become increasingly important to look at multiple factors that can influence the course of the illness. Previous studies have focused on effects of substance use and genetic vulnerabilities on psychosis. However, there has been increasing attention on the impact of childhood trauma on mental health and substance use. The purpose of this study was to evaluate the relationship between childhood abuse, psychiatric presentations, and substance use in an inpatient population admitted with psychosis. We evaluated the severity of current psychotic symptoms, age of first psychiatric presentation, total number of psychiatric hospitalizations, total years of substance use, and lifetime history of suicide attempts. Methods: In an ongoing study, cross-sectional data was collected for 35 adult patients who recently presented with psychotic symptoms to the dual diagnosis psychiatric inpatient unit at Mount Sinai Beth Israel. The severity of psychotic symptoms was measured with the Positive and Negative Syndrome Scale (PANSS) and lifetime substance use information was collected with the Drug History Questionnaire (DHQ). Childhood abuse was assessed with the Childhood Experience of Care and Abuse Questionnaire (CECA-Q). Results: There was a significant relationship between childhood trauma and substance use. Specifically, childhood sexual abuse was significantly associated with more years of alcohol, tobacco, and cocaine use, and childhood physical abuse was significantly associated with more years of cocaine use. There was no relationship between abuse history and PANSS scores, suicide attempts, age of first psychiatric presentation, or total number of hospitalizations. Conclusions: These preliminary results reveal that childhood sexual and physical abuse had a significant association with lifetime substance use, though it did not have a significant association with severity of psychotic symptoms or other clinical variables. The impact of childhood trauma may be an important factor to consider in interventions for substance use in treating dual diagnosis patients.

No. 14

The Impact of Adult Attachment on Depression and Social Anxiety Severity Over Time

Poster Presenter: Camelia G. Adams, M.D., M.Sc.
Co-Author: Andrew Wrath, B.A.

SUMMARY:
Background: Early trauma increases the risk for insecure attachment, which further increases the risk for future anxiety and depression. Major depressive disorder (MDD) frequently co-occurs with social anxiety disorder (SAD), and their comorbidity (MDD-SAD) increases clinical severity and functional impairment. Still the relationship between attachment change over time and the impact of this change on SAD and MDD is unclear. In the current study, we sought to determine if individual attachment changed over a one year period and whether this change, impacted the level of MDD and SAD severity Methods: 77 individuals (mean age = 26.64; 29.9% male) were categorized into three groups: MDD only, MDD-SAD, and healthy controls (HC) based on the SCID-I. Both mood groups were allowed to have additional anxiety disorders with their only difference being the presence/absence of SAD. All participants completed measures of depression (BDI-II), social anxiety (LSAS), attachment (ECR), and childhood trauma (CTQ) at two time points one year apart (mean days = 375). Paired-samples T-test was used to examine within-group changes. Between group changes were calculated using ANOVA and Kruskal-Wallis tests. Regression was used to predict change in symptom severity and

recollection of childhood trauma at follow-up. Results: The MDD-SAD group had a significant decrease on all measures of psychopathology, trauma recollection, and attachment anxiety. The MDD-SAD group showed significantly greater decrease in scores on measures of psychopathology and attachment. When compared to one another, the MDD and MDD-SAD groups only differed from each other in change in BDI-II. T1 attachment avoidance (? = .277, p = .011) and BDI-II (? = -.506, p < .001) were predictive of change in depression severity over time (p < .001, R2adjusted= 0.429). T1 attachment anxiety (? = .256, p = .021) and T1 BDI-II (? = .310, p = .01) were predictive of change in SAD severity over time (p = .001, R2adjusted= 0.232). The change in attachment interaction term (? = -.337, p = .005) and baseline total CTQ score (? = -.519, p < .001) were predictive of change in recollection of trauma over time (p <.001, R2adjusted= 0.255). Conclusion: Attachment anxiety improves over time, and this change impacts SAD severity one year later. The change in attachment avoidance is associated with an improvement in symptoms of depression one year later. Therefore it appears that treatments that target attachment dimensions are likely to also improve the likelihood of recovery from MDD and SAD.

No. 15

Assessment of Anxiety and Depression Symptoms After Percutaneous Coronary Intervention

Poster Presenter: Cristina Pilla Della Méa
Co-Authors: Luiz Antonio Bettinelli, Adriano Pasqualotti, Alexandre Leão Benincá

SUMMARY:
Cardiovascular diseases are among the leading causes of disability and death. One of the forms of treatment for them is the percutaneous coronary intervention (PCI). The objective of this study is to evaluate the symptoms of anxiety and depression in adult and elderly patients hospitalized after PCI. In addition, it was identified the sociodemographic profile of adult and elderly patients hospitalized after PCI; assess the risk factors for cardiovascular disease with symptoms of anxiety and depression in adult and elderly patients hospitalized after PCI. This was a cross-sectional study, analytical, correlational and comparative nature. Participated 266 patients, men and women, who underwent PCI in a referral hospital in southern Brazil. The data collection occurred on an individual basis in the period in which the patient was hospitalized. As instruments, were used a sociodemographic questionnaire; the Beck Depression Inventory - Second Edition (BDI-II) and the Beck Anxiety Inventory (BAI). For data analysis, were applied the chi-square test, ANOVA and linear correlation was used to analyze the data collected. The level of significance was p=0.05. As for the demographic profile, the results showed that the mean age was 64.5 years (SD = 8.9 years), and the majority of male patients (68%), married (72.9%), who live with someone (80.1%), have children (94.4%) and have basic education (80.1%). The diagnosis of most patients was acute myocardial infarction (64.3%), being performed angioplasty with stent placement (95.1%), by the Public Health System (97,7%). In relation to anxiety symptoms, the majority presented them in serious level (29.7%) and depressive symptoms of minimal intensity (51.9%). Regarding risk factors, the majority had a diagnosis of heart disease in the family (62.8%), was hypertension (83.5%) and presented dyslipidemia (51.5%), however, did not have diabetes (61.7%) or were obese (81.6%). There was no correlation between risk factors and symptoms of anxiety and depression. There was a significant difference regarding the age in relation to symptoms of anxiety (p = 0.026). Women showed symptoms of anxiety to severe level (p<0.001) and depression of severe intensity more prevalent (p<0.001). Patients who have already had a diagnosis of depression prior to the PCI, had higher scores of depressive symptoms in the severe intensity (p= 0.001). It is concluded that the symptoms of anxiety and depression in post-PCI should be evaluated and treated, because interfere negatively in the life of the cardiac patients, allowing lower adherence to medical treatment, difficulty in changing the style of life and, consequently, a poorer quality of life. It's emphasized the importance of a professional of psychiatric and psychology to accompany these patients during hospitalization by PCI.

No. 16

The Impact of Temperament and Character Dimensions on the Outcome of Cognitive Behavior Therapy (CBT) in Severe Panic Disorder

Poster Presenter: Thomas Sobanski

SUMMARY:
Background: In the literature it has been hypothesized that patients with panic disorder (PD) differ in their personality traits when compared to the average of the population (e.g. Cloninger et al. 1999). The current study was aimed to assess temperament and character dimensions in patients with PD who were treated on our behavior therapy ward. Moreover, we examined the predictive value of the Temperament and Character Inventory (TCI, Cloninger et al. 1993) with regards to the outcome of standardized cognitive behavioral therapy (CBT) in severe PD. Methods: 264 inpatients meeting the DSM-IV criteria of PD with and without agoraphobia were enrolled in the study. The Temperament and Character Inventory (TCI), the Symptom Checklist-90-R, the Beck Depression Inventory and the Panic and Agoraphobia Scale were used before and after standardized inpatient cognitive-behavioral therapy (CBT). Results: Patients with PD showed higher harm avoidance (HA) scores and decreased self-directedness and self-transcendence scores compared to the German standardization sample (Richter et al. 1999) before the start of therapy. The predictive value of TCI was comparably small: HA predicted 7.2 percent of the symptom severity variance after treatment, and no other temperament or character scale did predict therapy outcome accurately. A significant decrease in HA score was observed after CBT. This effect was correlated high significantly with the absolute pre-post differences in all symptom scales. Self-Directedness, Novelty Seeking and Persistency scores were increased after treatment. Conclusion: As suggested by earlier publications, patients with PD exhibited altered personality traits. In particular, they showed increased harm avoidance (HA). Both temperament and character dimensions showed a trend to normalization after treatment. Therefore it is questionable if a personality inventory as the TCI, when used in patients with severe anxiety disorders, validly measures personality traits or rather interferes with current states of anxiety and mood. Furthermore, the limited predictive value of TCI scores calls into question its usefulness in CBT of PD patients.

No. 17
Acute Exercise Decreases Anxiety to Unpredictable Threat but Not Fear to Predictable Threat
Poster Presenter: Tiffany Regal Lago, M.D.

SUMMARY:
Exercise has been proposed as a first-line treatment for anxiety disorders, largely due to its efficacy, accessibility, and adverse event profile (Stein & Craske, 2017). However, the mechanisms underlying the anxiolytic effects of exercise are unclear. This study examines the influence of exercise on two distinct aversive states implicated in anxiety disorders: fear, a phasic response to a predictable threat, and anxiety, a sustained response to an unpredictable threat. Thirty-two subjects (15 M, mean age 26.6 years) participated in sessions of high- and low-intensity biking (respectively, 60-70% and 10-20% of individual heart rate reserve as determined by VO2 max test) for 30 minutes, separated by 1-week. Threat response, i.e., eyeblink startle, was assessed with the “NPU” threat test. This test includes a neutral (N), and two threat conditions, one with predictable (P) and one with unpredictable (U) shock. An rANOVA of startle with Exercise (high- vs. low- intensity) X Threat (Unpredictable vs. Predictable) revealed an Exercise X Threat interaction ($F(1,31)=5.55$, $p<.05$): threat-potentiated startle during unpredictable threat was lower after high-intensity than low-intensity exercise. These results suggest that high-intensity exercise reduces anxiety (response to unpredictable threat) but not fear (response to predictable threat), a dissociation that may help inform clinical indications for this intervention and provide clues to neurobehavioral mechanisms.

No. 18
Cognitive Characteristics of Somatic Symptom Perception and Stress Coping Strategies in Patients With Generalized Anxiety Disorder
Poster Presenter: Jongchul Yang, M.D., Ph.D.
Co-Authors: Sehoon Shim, Jong-Il Park

SUMMARY:
Background and purpose: Generalized anxiety disorder (GAD) is one of the most common anxiety disorders in which there are various perceptions of

bodily sensations and somatic symptoms. The discomfort and severity of somatic symptom in GAD are affected by sensitivity for bodily sensation and interpretation pattern for somatic symptom as well as degree of physical response. Also, many patients with GAD have stressful life events during the illness. The purpose of this study was to investigate the cognitive characteristics of somatic symptom perception and stress coping strategies in patients with GAD. Methods: A total of 55 patients meeting DSM-5 criteria for GAD and same-sized normal controls were recruited for participation in this study. We evaluated the subjects using Somato-Sensory Amplification Scale (SSAS), Symptom Interpretation Questionnaire (SIQ), the Way of Stress Coping Questionnaire (SCQ), and the Generalized Anxiety Disorder 7-Item scale (GAD-7). We analyzed the data using an independent t-test and Pearson's correlation analysis ($p<0.05$). Results: GAD patients had significantly greater amplification of somatic sensation in SSAS (41.95±11.29 vs 22.64±7.17, $p<0.005$), higher score in physical interpretation (37.55±9.47 vs 36.96±8.97, $p<0.05$) and psychological interpretation (26.85±7.20 vs 25.33±6.19, $p<0.05$), and lower score in environmental interpretation (21.33±7.51 vs 27.36±6.91, $p<0.05$) of SIQ than normal controls. In terms of SCQ, GAD patients presented significantly lower scores on seeking social support (16.13± 4.44 vs 18.69± 2.65, $p<0.01$) and higher scores on wishful thinking (21.27± 4.25 vs 20.56± 2.90, $p<0.05$) than normal controls. GAD-7 scores were positively correlated with physical interpretation scores on SIQ by Pearson's correlation test ($p<0.001$). Conclusion: These results show that patients with GAD have greater amplification of bodily sensation, tendency towards a physical and psychological interpretation of somatic symptoms, and insufficient coping strategies for stress. Also, these findings give a theoretical basis on necessity for interoceptive exposure to bodily sensation, cognitive therapy of maladaptive interpretation, and improvement of insufficient stress copying strategy as well as pharmacological therapy in the treatment of GAD.

No. 19

Efficacy and Safety of Buspirone Augmentation in Patients With Generalized Anxiety Disorder: Randomized, Single-Blinded, Multicenter Study

Poster Presenter: Sheng-Min Wang
Co-Author: Kyoung-Uk Lee

SUMMARY:
Introduction Generalized anxiety disorder (GAD), with an estimated lifetime prevalence of 5.1%, is a chronic, relapsing, debilitating disorder which has a significant impact in impairment of social and occupational functioning. Buspirone's effectiveness in treating GAD has been demonstrated inconsistently in several studies. Because of buspirone's delayed onset of action, tolerability and relative lack of efficacy, buspirone is generally used in combination with antidepressants such as selective serotonin reuptake inhibitors (SSRIs) and selective serotonin–norepinephrine reuptake inhibitors (SNRIs). However, study investigating effects of buspirone, in addition to SSRI or SNRI, for treatment of GAD has not yet been conducted. The purpose of this study is to first investigate efficacy and safety of adjuvant buspirone in generalized anxiety disorder and second whether the efficacy and safety differ depending on the buspirone dosage. Methods This study was a randomized, single-blinded, multi-center study conducted from at psychiatry clinics of 11 hospitals in Korea. Male and female aged 18 years or older were eligible if they met the DSM-IV criteria for GAD based on The Mini-International-Neuropsychiatric Interview (MINI). Patients were randomly assigned to four groups: antidepressant only (venlafaxine XR or escitalopram), antidepressant (venlafaxine XR or escitalopram) + buspirone (15mg/day), antidepressant (venlafaxine XR or escitalopram) + buspirone 30mg/day, and antidepressant (venlafaxine XR or escitalopram) + buspirone 45mg/day. For buspirone 30 and 45mg groups, the buspirone dosage was increased by 15mg/week. All the efficacy analyses were based on the intent-to-treat (ITT) population that comprised all the randomized patients who received at least one dose of the study medication and who had at least one post-baseline efficacy assessment. The primary efficacy end point was change from baseline to week 8 (or end point) on the HAM-A total score analyzed using ANOVA with LOCF in the ITT sample. The secondary efficacy end point included change from baseline to end point on the HAM-D total score and CGI-S score. Results A total of 211 subjects were

screened, 197 were randomized, 182 of whom were treated at 11 sites in Korea. 49 (23.22%) completed the study. There were no significant differences among 4 groups in the baseline demographic and clinical characteristics. The mean improvement in HAM-A at week 8 was significantly higher for buspirone 15mg and 45mg groups than control. In addition, buspirone 45mg group showed significant improvement over control on the primary efficacy endpoint at week 4. The results showed that mean improvement in HAM-D at week 8 was significantly higher for buspirone 45mg group than control. Unlike HAM-A, no other buspirone groups showed significant superiority compared with control. In terms of mean change of CGI-S from baseline to week 8, buspirone 45mg group showed significantly higher improve

No. 20

Patterns of Maladaptive Behaviors in Patients With Autism Spectrum Disorder, Intellectual Disability, and Co-Occurring ASD and ID in Each Life Stage

Poster Presenter: Brendon D. Brockmann, M.D.

SUMMARY:

Introduction: Autism Spectrum Disorder (ASD) and Intellectual Disability (ID) are two neurodevelopmental disorders frequently referred for treatment of certain maladaptive behaviors, including: aggression, self-injurious behavior, and property destruction. Past studies have found certain maladaptive behaviors to be more prevalent in patients with ASD than in patients with ID1,3, and particularly prevalent in individuals with co-occurring ASD and ID2,3. Also, many of these maladaptive behaviors often improve with time and with age4-6. This cross-sectional study examines whether the type of maladaptive behaviors and their severity differs between life stages (childhood, adolescence, and adulthood) and between the three diagnostic categories studied: patients with ASD, ID, and co-occurring ASD and ID. We hypothesize that maladaptive behaviors will be most prevalent and severe in individuals with co-occurring ASD and ID, followed by ASD, then ID. We also hypothesize that certain maladaptive behaviors will be more problematic than others at each life stage. Methods: We analyzed data from 358 patients evaluated in a neurodevelopmental clinic at UC Irvine Medical Center between 2010 and 2013. Patients were grouped into the following diagnostic categories: ASD (n=28), ID (n=173), and ASD+ID (n=157). Patients were also classified into three life stages: childhood (n=64), adolescence (n=113), and adulthood (=201). Results: One-way ANOVAs indicated that regardless of diagnostic group, children consistently exhibited more maladaptive behaviors than adults. Adolescents were a distinct group: at times their maladaptive behaviors resembled those of children, at other times they resembled those of adults, and other times they were in-between the adult and children groups, depending on the specific behavior. We also found that regardless of life stage, individuals with combined ASD+ID have significantly more severe maladaptive behaviors than individuals with ID only. In addition, we found different patterns of maladaptive behaviors within each life stage based upon diagnostic group. For instance, there were more significant differences in maladaptive behaviors between diagnostic groups for adolescents than any other life stage. Discussion: Our study has found that certain maladaptive behaviors are more likely to occur in certain life stages amongst individuals with ASD, ID, and co-occurring ASD+ID. Regardless of diagnostic group, children were most likely to exhibit the maladaptive behaviors studied, and adults were least likely to exhibit these maladaptive behaviors, whereas adolescents were a distinct group. These findings have important implications for how clinicians understand and treat these conditions and their associated maladaptive behav

No. 21

Interaction Between Cortical Hemodynamic Changes During a Mind Reading Task and MET Receptor Tyrosine Kinase Polymorphism in Autism: An fNIRS Study

Poster Presenter: Halise D. Ozguven, M.D.
Co-Authors: Berker Duman, Emre Kale, Isil Yenihayat, Merve Demirbugen, Sinan Suzen, Bora Baskak

SUMMARY:

Background: Autism spectrum disorder(ASD) is a neurodevelopmental disorder with stereotypical movements, limited interest and disturbance of social communication. One hypothesis posits that a

common, functionally disruptive rs1858830 C allele may, together with other vulnerability genes, epigenetic and environmental factors, precipitate the onset of autism. The autism diagnosis relative risk was reported as 2.27 for the CC genotype and 1.67 for the CG genotype compared with the GG genotype. On the other hand neural correlates of this finding are not clear. We therefore performed functional near infrared spectroscopy (fNIRS) to measure cerebral cortex activity during the Reading the Mind from the Eyes task (eyes task) in subjects with ASD and healthy controls depending on the MET receptor tyrosine kinase (MTRK) polymorphisms. Methods: 17 healthy control and 20 male ASD cases, matched for age, education level and IQ (all above 70) were enrolled; and grouped according to the MTRK polymorphism (rs 1858830; G/G, C/G and C/C genotypes). Analyzes were done in the whole sample and separately in both groups as well. Cerebral cortex oxy-Hb changes were investigated by performing Hitachi ETG-4000 52-channel fNIRS device during the modified eyes task. A gender identification paradigm was employed as the control condition. Primary outcome measure was defined as the activity difference between the task and the control conditions; which presumably reflects solely the mind reading activity in the cerebral cortex. The optodes were positioned according to the international 10-20 system so that the measurement area covered predominantly frontal and temporal cerebral cortical regions. We compared three groups by Kruskal-Wallis statistical analysis. Results: We found significant activity differences between G/G,C/G,C/C genotype groups in the whole sample in channels 3, 13, 19, 25, 38 which respectively correspond to the left and right frontal eye fields, right and left premotor cortex, right and left supplementary motor cortex ($\chi 2(2)=10.148, p=0.006$;(2)=6.467,p=0.039; $\chi(2)=7.611, p=0.022$;(2)=8.807,p=0.012;(2)=8.852,p=0.012, respectively)(post-hoc activity contrasts: C/G=G/GCC).This was true for the index and control groups seperately as well. Conclusions: Compared to C/G and G/G polymorphism groups, individuals with C/C polymorphism did not exhibit increased activity in the cortical regions described above during mind reading. These findings may suggest lack of feeling of ambiguity expected in emotion processing processes which may be represented by the lack of mirror neuron activity in the C/C polymorphism group and 1858830 C allele can maybe a valid candidate for further research. Primary limitation of our study is the small-sample size, which limits the execution of advanced statistical analysis.

No. 22

Comparison of Hemodynamic Changes in Attention-Deficit/Hyperactivity Disorder With/Without Autism Spectrum Disorder

Poster Presenter: Hideki Nishimura
Lead Author: Kazuhiko Yamamuro
Co-Authors: Norio Otsuka, Maori Yasuda, Shizuka Taguchi, Chieko Aoki, Naoko Kishimoto, Shotaro Ueda, Toyosaku Ota, Toshifumi Kishimoto, M.D.

SUMMARY:
In 2013, the DSM-5 recognized the coexistence of attention deficit/hyperactivity disorder (ADHD) and autism spectrum disorder (ASD); this increased concern regarding these conditions. ADHD and ASD, as well as ADHD combined with ASD (ADHD/ASD) often exhibit high levels of impulsivity, which may be associated with the structural abnormalities and functional hypoactivities observed in the frontal cortex of these subjects. It is estimated that 30–75% of children diagnosed with ASD have symptoms of ADHD and 20-60% of children with ADHD have ASD-like social difficulties. Epidemiological research has also demonstrated notable associations between ADHD and ASD traits. These findings have significant implications for both the converging and discrete symptom presentations of ADHD and ASD.?Although near-infrared spectroscopy (NIRS) is a simple and non-invasive method for characterizing the clinical features of various psychiatric illnesses, few studies have used NIRS to directly investigate the association between prefrontal cortical activity and inhibitory control in patients with ADHD and ADHD/ASD. Using a 24-channel NIRS system, we compared hemodynamic responses during the Stroop color-word task in 34 patients with ADHD and 21 patients with ADHD/ASD. In addition, we recruited healthy controls matched for age, sex and full IQ. The both group exhibited significantly less activation in the frontopolar prefrontal cortex accompanied by lower Stroop color-word task performance, compared with controls. Unexpectedly, we found no differences in these

findings between patients with ADHD and ADHD/ASD. Moreover, multiple regression model have revealed that task performance including inhibitory control are related with hemodynamic responses in the prefrontal cortex. Our data suggest that reduced hemodynamic responses in the prefrontal cortex might reflect higher levels of impulsivity in patients with ADHD and ADHD/ASD, which are no any different.

No. 23

The Association of Intrapartum Synthetic Oxytocin Dosing and the Odds of Developing Autism

Poster Presenter: Stephen Michael Soltys, M.D.
Co-Authors: Jill Scherbel, Joseph Kurian, Todd Diebold, Teresa Wilson, Lindsay Hedden, Kathleen Groesch, Paula Diaz-Sylvester, Albert Botchway, Pamela Campbell, Julio Ricardo Loret de Mola

SUMMARY:

Introduction: Studies examining whether synthetic oxytocin (sOT) exposure during labor is associated with autism spectrum disorder (ASD) have produced contradictory conclusions. Methods utilized for labor augmentation or induction, the dose of sOT administered and any association of intrapartum sOT use with the eventual mode of delivery were not specified. Our objectives in the retrospective, case-control study reported here were to examine if intrapartum sOT use (as a function of dosage and time of exposure) and mode of delivery are associated with a subsequent diagnosis of ASD. Factors that affect dosing of sOT during labor such as elevated maternal body mass index (BMI) were also examined. Finally, because ASD is more prevalent in males, gender related sensitivity to sOT dosing was assessed. Method: Intrapartum induction, augmentation (including sOT dosing) and mode of delivery in 171 children under the age of 18 who met criteria for ASD were compared to those of 171 children without any ASD diagnosis matched by gender, birth year, gestational age and maternal age at birth. Associations between clinical variables and ASD were examined using conditional (or paired) logistic regression. A conditional logistic regression model was used to examine clinical variables and the odds ratio (OR) and Confidence Interval (CI) of having ASD. Results: A first-time Cesarean section (C/S), but not a repeat C/S, was associated with elevated odds of having ASD (OR=2.56, CI 1.44-4.58, p=0.001). Individuals who were exposed to high cumulative doses of sOT (above 5636 mU) had increased odds of developing ASD (OR=2.29, CI 1.10-4.62, p=0.026) as did those with high duration of exposure above 678 minutes (OR=2.12, CI 1.00-4.47, p=0.048). A maternal BMI above 35 at the time of delivery was also associated with elevated odds of ASD (OR=2.24, CI 1.23-4.05, p=0.008). A test for interaction between maternal BMI and cumulative exposure to sOT found increased odds of ASD (OR 1.31, CI 1.01-1.69, p=0.041) suggesting that mothers with higher BMI received greater cumulative doses of sOT required for augmentation/induction. A similar analysis testing for any association of cumulative dose of sOT and first-time C/S for ASD indicated no interaction. Analysis of the data for males showed elevated odds of ASD for those exposed to the high cumulative dose (OR=3.10, CI 1.34-7.13, p=0.008) and long duration of exposure (OR=3.75, CI 1.51-9.26, p=0.004). There was no significant association between sOT dosing and the odds of ASD in female subjects. Conclusion: This is the first report with detailed information regarding sOT dosing and if there is an association of the total dose, rate of administration and time of exposure to sOT, as well as mode of delivery and a subsequent diagnosis of ASD. The apparent specific susceptibility of males to high sOT exposures is intriguing, since the timing of sOT exposure falls in a critical period of steroid-induced sexual differentiation.

No. 24

Multisite Study to Find Similarities and Differences in Children With Autism Spectrum Disorder and Bipolar Disorder

Poster Presenter: Garima Singh, M.D.

SUMMARY:

Background: ASD is a developmental disorder arising in early years, whereas BD is primarily a cyclic affective disorder. It is estimated that 1 in 68 children have ASD and childhood prevalence of BD is approximately 0.1-1%. Research indicates 70% psychiatric comorbidities in individuals with ASD and 80-90% of them on psychotropic medication. However, there is limited research on the overlapping symptoms of conditions similar to ASD that may be confounding accurate diagnoses. In BD

and ASD, there are numerous symptoms that have significant overlap, especially when diagnosed during childhood. Some studies have been done on the prevalence of the BD and ASD and their correlation but the conclusions are conflicting and no clear results are available. Methods: Retrospective study in 2 different settings in 2 states (Southern Illinois university, Springfield, Illinois and Thompson center, Missouri Columbia). Data was analyzed from 100 CYASD diagnosed with autism at each site. All patients' analyzed at Thompson center received diagnosis and care at an Autism Speaks Autism Treatment Network Center of Excellence, affiliated with an academic medical center. Demographic information and specific variables were analyzed including age of diagnosis, delays in social skills and communication, presence of repetitive behavior, restricted interests, sensory issues, aggression, mood lability, depression, mania, thought disorder, family history of BD, ASD or disorders, toilet training, pregnancy and IQ. The criteria for assessing mood instability were the presence of emotional deregulation in the form of temper tantrums, difficulty with transitions, rigid behaviors, easy irritability, internalizing and externalizing behaviors. In our study, the results were approximate at both the sites for most of the variables. 99% had mood instability at SIU and 95% at TC. 50% of individuals had aggressive behavior at TC and 96% at SIU, 66 % had sleep disruptions at TC and 75% at the other center, 93% suffered sensory sensitivity at SIU and 90% at TC and none of them had been diagnosed with classic mania, hypomania at TC although 2 % at SIU suffered from it. 31% had family histories of BD at TC and 33% at SIU. 29% had family history of ASD at TC and 28% at SIU. Conclusions: In our study, majority of patients at both sites had aggressio

No. 25

Antidepressant Effects on the Pain Network in Patients With Depression

Poster Presenter: Yun Wang
Co-Authors: David Joel Hellerstein, M.D., Joel Asher Bernanke, M.D., M.Sc., Jonathan Posner

SUMMARY:

Background: Depression is a common disorder affecting 9.5% of the population and conferring significant negative long-term sequela. Antidepressant medications offer an effective treatment, yet nearly 50% of patients either do not respond, or have side effects rendering them unable to continue the course of treatment. More effective and targeted treatments are needed. To advance the pharmacology of depression, mechanistic studies can help by examining the pathways by which treatment are effective. In this study, we aimed to identify pathways by which antidepressants exert their clinical effect and to test whether the identified pathways are reproducible across two independent datasets. Methods: We conducted two independent antidepressant treatment studies with two different SNRI medications: duloxetine and desvenlafaxine. Both studies included a 10-week (duloxetine) or 12-week (desvenlafaxine) prospective, double-blinded, placebo-controlled trial with pre- and post-treatment MRI scans. The duloxetine cohort consisted of n=48 adults with depression, n=24 randomized to duloxetine, and n=24 to placebo. The desvenlafaxine cohort consisted of n=42 adults (n=20 desvenlafaxine; n=22 placebo). We utilized MVPA--a whole-brain, connectomic to examine FC. 18 MVPA-derived clusters showing significant treatment by time interactions. 12 of these 18 clusters were within the pain network, a previously identified network of 16 brain regions that co-activate during task-based fMRI studies of physical pain. In post-hoc analyses, we focused on the pain network. 16 region-of-interest (ROI) with 5mm radius were constructed. Results: Three important findings emerged: 1) Across two independent studies, SNRI antidepressants significantly decease functional connectivity within the pain network; 2) Placebo had non-significant effects on pain network density; 3) Change in pain network density mediated the relationship between treatment and symptom improvement (reduction in the HAM-D summary score). The study findings raise intriguing questions about the relationship between pain, depression, and their interaction. The reduction in pain network density and its effects on depression may occur through direct or indirect routes directly, reduction in pain network density may lead to improvement in depression; indirectly, reduction in pain network density may underlie an improvement in physical pain, which thereby gives rise to a reduction in depressive symptoms. This mechanistic question is particularly salient for SNRI medication which are

effective treatments for both depression and physical pain and may address in subsequent studies.

No. 26

Predicting Antidepressant and Placebo Responses in Persistent Depression Using Resting-State MRI Functional Connectivity

Poster Presenter: David Joel Hellerstein, M.D.

SUMMARY:

OBJECTIVE: To explore predictive patterns in patients of antidepressant medication and placebo response in patients with persistent or chronic depression, using machine learning analysis of resting-state MRI whole brain functional connectivity. DESIGN, SETTING, AND PARTICIPANTS: Multivariate pattern analysis was used to predict medication and placebo response based upon resting-state fMRIs performed before treatment. Consensus connections generated from multivariate pattern analysis were retrieved to predict the relative changes of the Hamilton Depression Rating Scale score (HDRS). DESIGN, SETTING, AND PARTICIPANTS Clinical trials of SNRI medications duloxetine and desvenlafaxine vs placebo. were conducted at the Depression Evaluation Service of the Department of Psychiatry, New York State Psychiatric Institute, from 2007 to 2015. 40 participants with chronic depression (DSM-IV-TR dysthymia or DSM5 persistent depressive disorder, without current MDD) receiving antidepressant administration (responders = 30; non-responders = 10) and 42 participants with chronic depression receiving placebo administration (responders = 13; non-responders = 29) were drawn from two larger clinical trials: a 12-week double-blind, placebo-controlled trial of desvenlafaxine and a 10-week double-blinded, placebo-controlled trial of duloxetine. RESULTS The binary pattern classification yielded a successful prediction of antidepressant and placebo response, with accuracy rates of 95% (38 of 40 patients in the antidepressant sample) and 95.2% (40 of 42 patients in the placebo sample), sensitivity rates of 100% (30 of 30 who responded to antidepressants) 84.6% (11 of 13 who responded to placebo), and specificity rates of 80% (8 of 10 who did not respond to antidepressants) and 100% (29 of 29 who did not respond to placebo). Support vector regressions yielded significant predictions of relative changes in the Hamilton Depression Rating Scale score, with p value of 2.1E-4 and 6.7E-6. Functional connectivity within frontal-limbic system has the most discriminative power. In the antidepressant group, superior frontal regions have the most discriminative power. In the placebo group, medial-orbital frontal regions have the most discriminative power. CONCLUSIONS AND RELEVANCE Findings suggest that placebo and medication responses are associated with distinct baseline patterns of network connectivity, which may have both clinical and scientific importance, potentially guiding patient care and elucidating neural targets for future interventions.

No. 27

Distinctive Antidepressant and Placebo Effects in Depression on Topological Organization of Brain Structural Networks

Poster Presenter: David Joel Hellerstein, M.D.
Co-Authors: Jie Yang, Jonathan W. Stewart, M.D., Patrick J. McGrath, M.D., Ying Chen, Zhishun Wang

SUMMARY:

OBJECTIVE: The functional, structural, and connectivity neuroanatomy of antidepressant and placebo effects have been studied in numerous investigations. However, no study has compared network-level structural alterations associated with antidepressant and placebo effects. DESIGN, SETTING, AND PARTICIPANTS: We used graph-theoretical analyses to examine gray matter (GM) structural networks of 42 adult patients with dysthymic disorder (DD) (DSM5 Persistent Depressive Disorder, without current major depression) who were administered the serotonin-norepinephrine reuptake inhibitor (SNRI) duloxetine (N=21) or placebo (N=21) as part of a double-blind, randomized clinical trial. The global and regional network measure alterations in the GM structural networks following administration of placebo or duloxetine were assessed after 10 week double-blind treatments. Global network measures were employed to quantify how the efficiency of the structural network in patients with DD was affected by antidepressant and placebo. Regional network measures were also adopted to localize specific regional connections alterations associated with

antidepressant and placebo treatment. RESULTS: In the antidepressant group, follow-up scans displayed decreased assortativity coefficients compared to baseline scans. As for regional network measures, duloxetine treatment was associated with the structural network having more hubs in the superior frontal and temporal regions, with altered betweenness in the amygdala and rectus gyrus; placebo treatment was associated with the structural network having altered betweenness in the thalamus and putamen regions. CONCLUSIONS AND RELEVANCE: Changes suggest that SNRI treatment and placebo treatment have differing effects of reconfiguring structural networks in patients with DD. Regions displaying altered local interconnectivity alterations associated with SNRI antidepressant treatment emerged in the cortical-limbic pathways, whereas regions associated with placebo treatment were mainly located in the cortical-striatal circuits. Limitations include small sample size; an inability to perform correlation analysis between depression severity (e.g., Hamilton Depression Rating Scale score) and network measure results; and a lack of a healthy control comparison group. Despite these limitations, our study is the first adopting graph-theoretical analyses to provide new insights concerning the neurobiological mechanisms associated with antidepressant and placebo treatments. Findings both coincide with well-established neuropsychological models of antidepressant and placebo action, and also suggest possible mechanisms of antidepressant and placebo actions via neural network reconfiguration.

No. 28

linical Outcomes of 600 Patients With MDD Treated by TMS in the Private Setting: The Contribution of BioTechPsychoSocial Integrated Clinical Care

Poster Presenter: Alan Z. A. Manevitz, M.D.
Co-Author: James Paul Halper, M.D.

SUMMARY:

Patient ranged in age from 15 to 92 (mean 48) underwent an average of 37.5 treatments (range of 20 - 108). Response rates and remission rates as assessed by the BDI were 72% and 66% respectively. Our results with aged subjects and those with comorbid anxiety are comparable to young and non-anxious subjects and will be presented in detail. We also found that improvement in Quality of Life (QOL) scales often surpassed improvement as measured by the BDI. We will discuss potential reasons why our results are superior to those of the pivotal clinical trial results of which led to FDA approval. These studies used medication and psychotherapy-free patients. In contrast, we allowed the use of medications and psychotherapy and even changes in these modalities during the treatment courses. Of interest was the observation that psychotherapy became more effective during and after TMS. There was significant improvement with severe Personality Disorders. In turn, more effective psychotherapy contributed to further improvement of response. Also unlike the pivotal studies in which interactions between treaters were proscribed we encourage such interactions. All in all, the superiority of results we obtained using a mixture of medication psychotherapy and interaction with treaters compared to the results of the pivotal studies give credence to the BioPsychoSocial model of care but with the addition of a High-Tech treatment component i.e. TMS. Treatment sites other than DLPFC chosen on the basis of studies of networks and connections based on technological advances in Neuroimage analysis are being explored Thus, we propose to introduce a newer term, BioTechPsychoSocial model, acknowledging the importance of “technology” such as TMS now available to modern psychiatry. Another potential contribution to our superior results is that we did not rigidly adhere to the standard treatment parameters. We often extended the number of treatments beyond that recommended, treating at higher frequencies and at higher intensities. Additionally, we often used bilateral treatment. Clinical rationales for deviating from the standard protocols and the effect of this on outcomes will be discussed. Concurrent drug use will be detailed showing that anticonvulsants and anxiolytics did not adversely affect clinical outcome nor was the concurrent use of bupropion or neuroleptics associated with seizures. We propose that our results justify the use of the term BioTechPsychoSocial Model. The theoretical underpinnings of the BioTechPsychoSocial in terms of activation of neural networks will be discussed. Effect of residual symptoms in remitters on QOL and

relapse as well as approaches to eliminating them will be discussed.

No. 29
Neuroimaging Findings in Lithium Response Groups in Bipolar I Disorder: An Exploratory Magnetic Resonance Imaging Study
Poster Presenter: Carlos A. Lopez, M.D.

SUMMARY:
Background: MRI studies in bipolar disorder (BD) have shown neurotrophic and neuroprotective effects of lithium, suggesting that this could be a pathway of its therapeutic effects. However, little is known about the neuroimaging differences among lithium response groups and its association with treatment efficacy. The objective of this study is to identify neuroanatomical and neurofunctional differences between lithium response groups and healthy subjects. Methods: A cross-sectional exploratory study including 18 euthymic BD-I patients under lithium treatment and 9 healthy subjects matched by sex and age were included and evaluated using DIGS, HDRS, YMRS, GAF and Alda Scale. Based on the Alda Scale score, patients were divided in 2 groups, Lithium responders (Li-R n=7) and non responders (No-Li-R n=11). MRI was acquired in 3T scanner and a volumetric analysis was performed. Results: There were no differences in demographic variables among the 3 groups. After adjusting by age, greater volumes were found in No-Li-R group when compared with controls in left thalamus (p=0.007), left hippocampus (p=0.003) and amygdala (L: p=0.006/R: p=0.001). Li-R group had greater volumes in left hippocampus (p=0.007) and right amygdala (p=0.002) compared with control group. There were no statistical significance when comparing Li-R vs No-Li-R groups. Conclusion: Neuroanatomical differences were found in the patients' groups when compared with healthy controls in structures of the limbic system which has been widely implicated in the pathophysiology of BD. Possibly the mechanism underlying lithium response goes beyond its volumetric effects at the brain level. However, future studies with larger and prospective samples are required.

No. 30
WITHDRAWN

No. 31
Trends in Select Psychotropic Medication Use in Youth From 1999–2014
Poster Presenter: Carol E Swetlik
Lead Author: Alexander Chaitoff
Co-Author: Adele C. Viguera, M.D., M.P.H.

SUMMARY:
Introduction: In 2004, the FDA issued a black-box warning on the risk of suicidality in young persons treated with antidepressants. Concern emerged whether such a warning would cause more harm, leading to a decrease in depression diagnoses and antidepressant use. Given these concerns and the broadening use of atypical antipsychotics (SGAs) across diseases, we examine trends in filled psychotropic prescriptions used to treat mood symptoms in a nationally-representative sample of youth. Methods: The sample consisted of youth under 18 years who took part in the National Health and Nutrition Examination Survey (NHANES) from 1999-2014. NHANES is a cross-sectional survey that utilizes a complex, multistage, clustered probability method to provide national representative estimates. Descriptive statistics were used to compare rates of participants taking select medications reported as possible treatments for mood problems, including SGAs, selective serotonin reuptake inhibitor (SSRIs), selective norepinephrine reuptake inhibitors, mirtazapine, serotonin antagonist and reuptake inhibitors, bupropion, tricyclics, and monoamine-oxidase inhibitors. Usage before and after the 2004 warning was explored using chi-square tests. Log linear models were used to assess trends in medication usage patterns across the study period. All analyses were weighted and conducted in R version 3.4.2. Results: The sample consisted of 34,735 participants representing 351 million youth. 386 participants, representing 5.7 million youth (1.7%, 95% CI=1.4%-2.0%), reported taking one of the studied psychotropics, with a similar proportion taking antidepressants before and after the black box warning (p=0.886). SSRIs and SGAs were the most-often prescribed medications, making up 79.1% (95%CI=70.7%-86.0%) of selected medications. The average proportion using SSRIs decreased from 63.2% (95% CI=55.1%-71.0%) to 52.1% (95%CI=43.6% 60.0%, p=0.054) after the 2004

warning, while the proportion using SGAs increased from 17.6% (95%CI=11.6%-26.0%) to 34.4% (95%CI=27.5%-42.0%, p=0.002) post warning. Use of other studied medications did not change significantly. While both SSRI and SGA use increased from 1999-2004, from 2005-2014, trends in SSRI and SGA use were inversely related each year, with an overall 46% reduction in SSRI use (p=0.011) and a 2.04-fold increase in SGA use (p=0.003). Conclusions: In a nationally-representative sample, use of SGAs and SSRIs were consistently inversely related following the FDA warning with an overall significant decrease in the use of SSRIs from 2005 through 2014. The data also suggest a possible compensatory increase in filled SGA prescriptions during the same time period. The increasing use of SGAs and their potentially adverse metabolic profile compared to antidepressants have important safety and clinical implications in children and adolescents.

No. 32

First Reported Case of Constipation With Retention of Lisdexamfetamine Dimesylate Capsules in an 11-Year Old

Poster Presenter: Usman Hameed, M.D.
Co-Authors: Asfand Khan, M.D., Aisha Waheed, M.D., Ahmad Hameed, M.D.

SUMMARY:
Introduction: Attention Deficit Hyperactivity Disorder (ADHD) has a worldwide prevalence of 5.29% (1). First line treatments include central nervous system stimulants with therapeutic response close to 70% (2). Lisdexamfetamine Dimesylate (LDX(Vyvanse)) developed by Shire Pharmaceuticals, is used as once daily dose for treatment of ADHD. Adverse Effects most commonly reported (>5%) were decreased appetite, increased sleep latency, tics, abdominal pain and weight loss (3). Case: An 11-year old male with ADHD presented to the emergency department (ED), due to 1 week history of epigastric pain and worsening constipation. Parent noted diarrhea with constipation 24-48 hours before presentation. An abdominal x-ray was significant for approximately 20 capsules in the large intestine. As his condition was stable, he was discharged home with symptomatic treatment, but returned with worsening abdominal pain. Previous medication trials include immediate release Mixed Amphetamine Salts (MAS(Adderall)), Clonidine and Melatonin. About 10 weeks prior to ED visit, he began LDX, Clonidine and Melatonin as needed with good response. Patient had noted pieces of orange capsules in stool and subsequently developed abdominal pain with bowel movements. He was noted to be sleepy but parent discounted possibility of acute ingestion. His physical and mental status exam were grossly normal in ED. Vitals and labs were mostly unremarkable. An abdominal X-Ray revealed capsules within the colon. Due to presumed LDX in the colon, poison control recommended a bowel cleanout. Patient was admitted, received IV fluids, saline enemas and bowel cleanout. A repeat abdominal x-ray revealed decreased number of capsules. He was discharged with Polyethylene Glycol and was advised to discontinue LDX. At follow up appointments with gastroenterology and psychiatry, no abdominal pain or constipation was reported. Patient was placed on MAS which was titrated without any significant side effects. Discussion: LDX has a lower rate of non-medical use than immediate release stimulants and lower or equivalent rate in comparison to other long-acting stimulants (3). After about 10 weeks of LDX treatment, the patient developed GI symptoms. A literature search did not reveal prior reports of constipation with LDX or retention of capsules in the GI tract. The retention of LDX capsules may impact efficacy and cause sympathetic toxidrome. A potential safety concern is whether the absorption of the active ingredients is dependent on the capsules dissolving. This is especially important since there were intact capsules noted on X-ray. If capsules contained active ingredient, the patient could potentially be exposed to a toxic dose of the medication if the capsules were to disintegrate. Conclusions: LDX may cause constipation in individuals with ADHD and capsules may be retained in the GI tract with possibility of a sympathetic toxidrome. Further studies are warranted to address this safety concern.

No. 33

A Literature Review of Instruments Measuring Burden in Caregivers of Children With Mental Health Disorders

Poster Presenter: Venkata B. Kolli, M.D.
Co-Authors: Kevin Fuji, Kimberly Galt, Thomas Svolos

SUMMARY:
Background and Aim: Assessing and addressing care giver burden can potentially improve mental health outcomes. The objective of this exploratory study is to identify the psychometric instruments that measure burden in caregivers of children with mental health disorders, and describe the populations for which these instruments have been developed. Methods: A literature review was conducted using an iterative search strategy beginning with the keywords: caregiver burden, caregiver stress, caregiver strain, mental health disorder, psychiatric disorders, child, adolescent, instrument, tool, evaluation, and assessment. The following databases were searched: PsycINFO, Medline, EBSCOhost, ERIC, and Google Scholar. A secondary search was conducted of the reference list for each identified instrument. Finally, existing repositories of information about caregiving burden tools were used as a check to ensure comprehensiveness of the search (e.g. American Psychological Association's website listing measurement tools for caregiving burden and stress). Two inclusion criteria guided instrument selection: 1) either developed for use in caregivers of children with mental health disorders, or developed for use in caregivers of adults with mental health disorders and used in caregivers of children; and 2) English language version available. Results and Conclusion: A total of ten instruments were identified: three designed specifically for use in caregivers of children with mental health disorders, and seven designed for use in caregivers of adults with mental health disorders, but used in caregivers of children. This foundational work prepares us to assess where instrumentation is comprehensive, and appraise gaps in the current assessment of caregiver burden. A study is underway to determine optimal instrumentation for measuring burden in caregivers of children with mental health disorders in the clinical setting.

No. 34

Characteristics of Early Readmissions to Child and Adolescent Psychiatry Acute Inpatient Unit

Poster Presenter: Yasin Bez, M.D.
Co-Authors: Ariel Smith, B.S.N., R.N., Samantha B. Saltz, M.D., Judith Regan

SUMMARY:
Background: There are increasing numbers of children and adolescents who are admitted to a hospital with a primary psychiatric diagnosis. (1). Outcome studies indicate that short-term residential programs significantly improve symptoms and functioning of these vulnerable youth (2). However, there are many children and adolescents who need rehospitalization following acute psychiatric treatment (3). Little is known about the characteristics of this population. This study aimed to identify characteristics of children and adolescents who were admitted multiple times to a psychiatric unit over 5 months, and compare these characteristics between genders. Methods: Patients who were admitted to Jackson Behavioral Health Hospital's Child and Adolescent Inpatient Psychiatric Unit between January 1, 2017 and May 31, 2017 were included in the study. Among them, characteristics of patients who were readmitted at least once during the study period (January to May 2017), were further investigated in terms of age, number of readmissions, and days until readmission; these characteristics were then compared between genders. Results: A total of 778 children (415 girls, 363 boys) were admitted to the CAAP Inpatient Unit between January 01, 2017 and May 31, 2017. Among them 8% of patients (n=68, 34 girls and 34 boys) were readmitted at least once. Gender distribution of patients admitted one time was statistically similar to that of patients admitted multiple times. The most common diagnosis of readmitted patients was unipolar depression followed by ADHD, and schizophrenia/psychosis. Girls were more likely to be diagnosed with unipolar depression when compared to boys (28/34 vs 18/34, respectively). Mean age of the readmitted patients was 14.65±0.62 (min-max: 7.1-18) years, mean number of readmissions was 1.58±0.15 (min-max: 1-10), and mean number of days until readmission was 12.13±1.21(min-max: 3-39) days; both genders were statistically similar in terms of these clinical variables. Both genders showed similar distribution of readmission frequency. Thirty patients (44% of all readmissions) were readmitted multiple times within the 5 month period. The frequency of boys was higher in the multiple early readmission group when compared to the one early readmission group (63.3% vs 36.7%,

Chi-square=3.81, p=0.05). Conclusions: Early readmission rate is high among children and adolescents who have a primary psychiatric diagnosis. There seem to be gender differences in terms of primary psychiatric diagnosis and the number of early multiple readmissions. Further studies to explore characteristics of patients with early readmissions will help improve inpatient psychiatric care.

No. 35

The Effects of Pharmacological Treatment on RSFC in First-Episode Drug-Naïve Adolescents With MDD

Poster Presenter: Yujin Lee
Co-Authors: Jeonho Lee, Sangwon Park, Jongha Lee, Moonsoo Lee

SUMMARY:
Major depressive disorder (MDD) is one of the most prevalent psychiatric disorders and is the second leading cause of disability worldwide. Neuroimaging methods allow researchers to gain a comprehensive understanding of neural mechanisms in MDD. However, resting-state functional magnetic resonance imaging (rs-fMRI) for the purpose of evaluating the treatment response in adolescents is currently lacking, compared to adults. It is known that DMN (Default mode network) is increased in MDD compared to that in healthy control (HC) subjects. We aim to study the effects of antidepressant treatment on brain functional connectivity. We recruited 17 well-defined first-episode drug-naïve adolescents, aged 13 to 18 years, with MDD. We performed baseline rs-fMRI scans on both groups of MDD adolescents and HC adolescents. We then followed the MDD adolescents with rs-fMRI after 12 weeks of antidepressant treatment. ROI-to-ROI RSFC analyses were performed using the CONN toolbox. In our previous study, the MDD group demonstrated lesser RSFC than HC in dorsal anterior cingulate cortex (dACC) with anterior DMN, precuneus with salience network (SN), and anterior DMN with SN. We observed significantly increased connectivity between anterior DMN and SN after antidepressant treatment. This change in DMN connectivity following antidepressant treatment suggests an important pathway in the pathophysiology through which antidepressants may reduce depression in adolescents.

No. 36

Obstetric Complications and Attachment Disorder in Offspring: A Population-Based Study

Poster Presenter: Roshan Chudal, Ph.D., M.B.B.S., M.P.H.

SUMMARY:
Background: Attachment disorder (AD) is characterized by abnormal pattern of social functioning and associated with behavioral and emotional disturbances in children. Obstetric complications are associated with several neuropsychiatric diorders (NPDs) with a strong association between low Apgar scores and Autism and Attention deficit hyperactive disorder (ADHD) (Halmøy et al. 2012, Polo-Kantola et al 2014). Increased risk of NPDs is seen among children born by cesarean birth (Chudal et al. 2014, Polo-Kantola et al 2014). However, no population-based studies till date have examined the obstetric risk factors for AD. The aim of this study was to examine the association between obstetric risk factors and offspring AD. Methods: This study used a nested case control design to identify 773 individuals born in Finland between 1996 and 2012 and diagnosed in Finnish Hospital Discharge Register (FHDR) as attachment disorder by the end of 2012. Each case was matched with four controls (n=3077) without any diagnosis of attachment disorder, severe or profound mental retardation or anxiety disorder as identified from Finnish Population Register. Controls were matched by the date of birth (±30 days), sex, and place of birth. Conditional logistic regression model was used to examine the association between obstetric factors: Apgar score (1 min), neonatal treatment, birth presentation (cephalic, breech, or other), birth type (vaginal cephalic, vacuum extractor or forceps, vaginal breech, planned cesarean, other cesarean including urgent), bleeding during pregnancy requiring hospitalization, induction of labour and maternal hypertension and offspring AD. In the final model adjustment was made for potential confounding due to parental age, parental psychiatric history, maternal substance use, maternal smoking, maternal SES and marital status. Results: In the unadjusted analyses, 1 minute Apgar

scores of <7 (OR=1.85,95% CI:1.33-2.58) and 7-8 (OR=1.23,95%CI:1.01-1.50) and neonate monitoring / Neonate intensive care (NICU) (OR=2.38,95%CI:1.90-3.0) had increased odds for AD. On adjustment for confounders, children requiring neonatal monitoring/NICU care had a 1.7-fold (OR=1.76,95% CI:1.20-2.57) increased odds for AD. Maternal Hypertension had an increased odds for AD, although it narrowly missed statistical significance (OR=1.78,95%CI:0.99-3.17). Discussion: In this first population-based study, we report an association between children requiring NICU care and later AD. This highlights the role of possible biological factors as shown by neonatal immaturity requiring care as well as psychosocial effects of separation of the mother-child in early life in the causation of AD. These findings are even more relevant when considering the long term effects due to the advances in neonatal care enabling the survival of an ever increasing numbers of premature children.

No. 37

Designing a Health Care Model for High-Needs, High-Cost Patients With Complex Behavioral Health and Psychosocial Needs

Poster Presenter: Chuan Mei Lee, M.D.
Co-Authors: Claudia Scheuter, Danielle Rochlin, Brian Brady, Terry Platchek

SUMMARY:

INTRODUCTION: In the U.S., the top 5% of healthcare spenders accounted for 50.4% of the total $3.2 trillion in healthcare spending in 2014. While the high-need patient population is diverse, the National Academy of Medicine has identified three criteria to characterize this population: 1) high total accrued healthcare costs, 2) high intensity of care utilized, and 3) functional limitations. The Commonwealth Fund estimates that about 31% of high-need adult patients also have a behavioral health condition and low socioeconomic status. Physical illness, mental illness, and unmet social needs are closely associated, and these factors likely drive the cost of care for this population. OBJECTIVE: To design a value-based healthcare model to reduce cost and improve quality and experience of care among high-needs, high-cost patients with complex behavioral health and psychosocial needs. METHODS: We used a human-centered design methodology for healthcare delivery innovation developed at Stanford University's Clinical Excellence Research Center (CERC) and taught through the Stanford CERC Healthcare Design Fellowship curriculum. The CERC methodology includes: 1) didactics in design thinking, healthcare economics, and health policy, 2) literature review and site visits, 3) identification of key cost drivers, unmet needs, and possible solutions, 4) care model iteration and cost modeling, and 5) dissemination through care model publications and implementation guides. RESULTS: We identified three key challenges among high-needs, high-cost patients with complex behavioral health and psychosocial needs: 1) inappropriate use of acute care services, 2) behavioral health treatment gaps, and 3) unmet social needs whose costs get carried over to the healthcare sector (the "wrong pocket" problem). To target these challenges, we proposed a care model that: 1) promotes less resource-intensive care settings, 2) better integrates behavioral health and physical health, and 3) creates cross-sector collaborations to address social determinants of health. DISCUSSION: We anticipate that our care model will reduce cost, improve care outcomes, and improve patient experience. We plan to partner with a healthcare delivery organization to pilot the feasibility of implementing and scaling our model.

No. 38

Associated Risk Factors for Psychological Distress in Patients With Gastric Tumor Undergoing Endoscopic Submucosal Dissection (ESD)

Poster Presenter: San Lee
Co-Authors: Joonhyub Lee, Han Ho Jeon, Won-Jung Choi

SUMMARY:

Background: There have been a few studies that explored the psychological distress associated with gastric neoplasm. It is predicted that similar psychological experiences occur during gastric endoscopic submucosal dissection (ESD). The purpose of this study was to evaluate the psychological distress and associated risk factors for distress among patients with gastric tumor undergoing ESD. Methods: A total of 91 patients treated with ESD for gastric tumor between May

2015 and June 2016 were prospectively enrolled in Korea. Sociodemographic factors were evaluated and the self-report scales including the Distress Thermometer (DT) for distress, the Global Assessment of Recent Stress (GARS), and the Perceived Stress Scale (PSS) for stress were administered before gastric ESD. The Montgomery-Asberg Depression Rating Scale (MADRS) and the Hamilton Anxiety Rating Scale (HAM-A) were assessed by trained psychiatrists on the same day. Using DT score of 4 as preset distress cut-off score, all the participants were divided into non-distress or distress group. Logistic regression analysis was performed to find associated risk factors for psychological distress during gastric ESD. Results: Twenty-six (28.6%) patients were identified as patients with psychological distress. The distress and non-distress groups showed no difference in age, education level, or socioeconomic status. The distress group showed higher female and higher unmarried status ratios than the non-distress group ($p=0.004$, $p=0.014$, respectively). Psychiatric comorbidity was more common in the distress group ($p=0.020$). Depressive and anxiety symptom scores measured by MADRS and HAM-A showed higher symptom scores in the distress group (all $p<0.001$). The stress scales of GARS and PSS also revealed that the distress group had more general stress than the non-distress group ($p<0.001$, $p=0.001$, respectively). Univariate logistic regression analysis revealed variables showing a significant correlation with distress included female sex, unmarried status, psychiatric comorbidity, depression (MADRS), anxiety (HAM-A), and stress (GARS). A multivariate analysis showed that unmarried status (odds ratio [OR], 4.94; 95% CI, 1.13-21.56), anxiety (HAM-A) (OR, 1.24; 95% CI, 1.12-1.39), and stress (GARS) (OR, 1.06; 95% CI, 1.01-1.12) were associated with psychological distress. Conclusion: An unmarried status and a high level of anxiety and stress caused patients undergoing gastric ESD to feel more psychological distress. It could be helpful to screen and proactively monitor patients with such conditions before performing gastric ESD. This study was supported by a grant from the National Health Insurance Service Ilsan Hospital, Goyang, Korea.

No. 39

Organ Transplantation and Chronic Pain:

Embedding a Pain Rehabilitation Specialist in a Transplant Center

Poster Presenter: Brian Rodysill
Co-Authors: Eleshia Morrison, Terry D. Schneekloth, M.D., Sheila G. Jowsey-Gregoire, M.D.

SUMMARY:

Background: 52,404 people died of drug overdose in the United States in 2015 with 63. 1% involving an opioid. This represents a 15. 6% increase in the age-adjusted opioid-involved death rate since 2014 (Rupp 2016). Increased opioid use prior to kidney transplantation has been shown to significantly increase risk of clinical complications following transplantation including ventricular arrhythmias and cardiac arrest (Lentine 2015). Methods: A pain rehabilitation psychologist joined an embedded transplant center psychosocial team to assess and provide behavioral pain management recommendations for transplant candidates, recipients, and donors. Patients completed a 60-minute assessment of their chronic pain, pain treatments, and functional impact of pain to determine candidacy for comprehensive cognitive-behavioral pain rehabilitation treatment. Of 23 patients referred for evaluation, 20 authorized use of their information for research. Their medical records were analyzed for age, sex, organ of transplantation, primary medical diagnosis, nature of pain, active use of opioids, list of current and past opioid use, status pre-/post-transplantation, recommendations of pain specialist, and candidacy for the comprehensive pain rehabilitation center (PRC) at Mayo Clinic. Results: At the time of initial consultation: the mean age of the patients was 44. 2 years of age and 75% were male. The types of transplant for these patients were liver, pancreas, kidney, heart, autologous bone marrow transplant, and allogeneic bone marrow transplant. 85% of these patients were currently prescribed some form of opioids. 65% of these patients were pre-transplant. 50% were considered candidates for the comprehensive PRC program.Discussion: These findings reveal the broad nature of chronic pain facing patients with many different types of transplant. The fact that a majority of these patients were on opioids and pre-transplant requires further attention in the context of recent multivariate analyses showing a significantly increased incidence

of ventricular arrhythmias, cardiac arrest, mental status changes, drug abuse, alcohol abuse, accidents, graft loss, and post-transplant death in kidney transplant patients receiving higher doses of morphine equivalents before transplantation (Lentine 2015, Lentine 2015). Conclusions: This research supports the feasibility of collocating pain rehabilitation consultation within a transplant setting. It also speaks to the broad nature of chronic pain as well as chronic opioid use across all transplant populations.

No. 40

Psychiatric Morbidity in Stoma Patients

Poster Presenter: Raquel Serrano
Co-Authors: Pedro Barata, Alice Luís

SUMMARY:
Background: The presence of a stoma may lead to substantial psychological distress and impaired health-related quality of life for many patients. The authors aim to do a systematic review about the psychiatric morbidity in stoma patients. Methods: Systematic review through literature research in Pubmed, Medline and PsycInfo databases, using the keywords stoma, ostomy, psychiatry and the boolean operator AND, followed by the application of database-specific filters and eligibility criteria. Results/Conclusion: It was observed that difficulties in coping with the stoma after surgery were a predictor of psychiatric disturbance. Illness perceptions and coping strategies were found to impact patient's psychological well-being and to mediate anxiety and depression. Maladaptive coping styles (eg: denial over diagnosis) were found to exacerbate depression and anxiety symptoms and were associated with poor outcomes whereas self-efficacy and emotion-focused coping style (eg: seek for advice) were found to reduce depression. Additionally, specific personality traits may impact the coping responses and health-related quality of life. Evidence concerning the effects of ostomy use on sexual outcomes is limited. However, some studies suggest that difficulties may be more pronounced for patients with ostomies. It is important to provide mental health support for stoma patients with psychological distress, since ostomies may have a negative impact on mental health and psychosocial functioning.

No. 41

Psychological Factors Influence the Irritable Bowel Syndrome and Their Effect on Quality of Life Among Firefighters in South Korea

Poster Presenter: SeungHo Jang
Co-Authors: Min-Jung Soh, M.D., Min-Cheol Park, M.D., Ph.D., Sang-Yeol Lee, M.D., Hye Jin Lee

SUMMARY:
Background: The purpose of this study was to investigate the characteristics of psychological factors that are related to irritable bowel syndrome (IBS) and their effects on the quality of life (QOL) of firefighters in South Korea. Methods: This study examined data collected from 1217 firefighters in South Korea. After identifying firefighters with IBS according to the Rome III diagnostic criteria for functional gastrointestinal disorders (FGIDs), we collected demographic data and psychological variables through self-administered questionnaires. In order to observe the distribution of the high-risk group in the Korean occupational stress scale (KOSS) subcategories, we conducted logistic multiple linear regression. The correlations between psychological factors and QOL were analyzed and we performed a stepwise regression analysis. Results: The groups (firefighters with and without IBS) showed differences by sex, working period, task, working pattern, Patient Health Questionnaire-9, Generalized Anxiety Disorder Questionnaire-7, Korean Occupational Stress Scale, Rosenberg's Self-Esteem Scale, and the World Health Organization Quality of Life-BREF. IBS risk was higher in the following KOSS subcategories: job demand [OR 1.79, 95% CI: 1.11-2.89], interpersonal conflict [OR 2.21, 95% CI: 1.25-4.33], organizational system [OR 1.87, 95% CI: 0.58-3.30], and lack of reward [OR 2.39, 95% CI: 1.08-5.26]. The final regression model explained 42.6% of the variance in overall quality of life. Conclusion: The findings of this study indicate that a number of psychological factors increase the likelihood of irritable bowel syndrome (IBS) and affect QOL. Therefore, when diagnosing IBS in the future, mental health aspects should be considered in addition to physical health. Key Words Irritable bowel syndrome, Occupational stress, Quality of life, Depression, Firefighters

No. 42

Multi-Group Latent Class Analysis of Gender Differences in Lifetime Anxiety Disorders Comorbid Depressive Symptoms

Poster Presenter: Xiao Wang
Co-Authors: Yueqin Huang, Zhaorui Liu, Hongguang Chen

SUMMARY:

Background: Depression and anxiety disorders are the most prevalent mental disorders worldwide.The epidemiology of comorbid depression and anxiety has received substantial research evidence, while most of them focus on disorders based on diagnostic criteria. This study aimed to describe the prevalence of lifetime depression disorders in residents with anxiety disorders based on a population-based sample in Chifeng City Inner Mongolia. Besides, this study was also designed to explore the gender differences of depressive subtypes in anxiety patients and to provide theoretical evidence for early diagnosis and prevention strategy of mental disorders. Methods: This study was a cross-sectional study conducted among 6376 community residents. The Composite International Diagnostic Interview-3.0 (CIDI-3.0) was administered to make diagnoses of mental disorders and collect social demographic information. Results: A total of 4,528 respondents were interviewed in this study. The response rate is 71.2%. The prevalence estimates for anxiety in the total sample were 5.70% for lifetime and 3.96% for the 12 months before the interview. Among residents who ever had anxiety, most of them had depressive symptoms while 15.79% of them met the criteria of MDD. There were significant differences between male and female. Latent class analysis (LCA) resulted in the lowest BIC values for a four-class solution. From the results of multiple-group latent class analysis, we could see that the latent class probabilities were different between male and female. The female group in class 2 was characterized by a very high endorsement rate of prominent symptoms while the male group was not. Besides, in class4, the female group was characterized by thoughts of death while the male group was not. Conclusion: The prevalence rates of comorbidity were similar to the reports of previous regional surveys in China and there are statistically significant differences of comorbidity between male and female. Precision prevention should be targeted at different kinds of population.

No. 43

Common and Unique Factors Associated With the Prevalence of MCI in Beijing Urban and Rural Areas

Poster Presenter: Fang Yan
Co-Authors: Yueqin Huang, Xin Yu, Zhaorui Liu, Shuran Li

SUMMARY:

Background: Although the role of education in modifying the effect of neurodegenerative brain damage in late life have been reported by previous studies, the extent to which these effects can be modulated by exposure to urban environments has seldom been addressed. Methods: We used data from a 10/66 study conducted in Xicheng District (urban) and Daxing District (rural) of Beijing to investigate whether the effect of education on the prevalence of MCI could be reduced by urban exposure. Results: We found that education had larger effect in the rural area than in the urban area. Besides education, we also found larger effect of age and sex on the prevalence of MCI in the rural area than in the urban area. Conclusion: Urban exposure could increase cognitive reserve, which can compensate for the lack of education.

No. 44

Depression as a Cardiovascular Risk Factor

Poster Presenter: Ben Attwood

SUMMARY:

Patients with mental illness are more likely to develop cardiovascular disease than people without mental illness (1). In people with depression endothelial dysfunction, a predictor of cardiovascular disease, is associated with a depressive episode and persists after recovery (2). However, it is not known whether the abnormalities occur as a result of depression or precede it. To answer this question we have analysed data from the ALSPAC cohort to examine the hypothesis that those with depression at age 18 will have preceding vascular abnormalities at age 11. 3681 participants had endothelial function measured at age 11 and were assessed for depression at age 18. At age 18,

17% of participants were diagnosed with depression. Statistical modelling using this data demonstrates that poor vascular function at age 11 is not associated with depression at age 18 (OR=0.98, p=0.65). The results of this study indicate that the relationship between poor cardiovascular health and mental illness begins after the first episode of mental illness.

No. 45

12-Month Prevalence and Concomitants of *DSM-IV* Depression and Anxiety Disorders in Two Violence-Prone Cities in Brazil

Poster Presenter: Sergio Blay, M.D.

SUMMARY:

Background: To estimate the 12-month prevalence of depression, anxiety, and comorbid anxiety/depression in noninstitutionalized adults (age 15–75) in two violence-prone cities. Methods: The Composite International Diagnostic Interview version 2.1 (Portuguese), administered in population-representative studies (age 15-75), in São Paulo (N=2536) and Rio de Janeiro (N=1208), yielded DSM-IV diagnoses of 12-month depression and anxiety disorders, which were classified into four mutually exclusive groups: 1) no anxiety/depression (reference group); 2) anxiety only; 3) depression only; 4) comorbid anxiety/depression. Weighted analyses estimated 12-month prevalence, demographically-adjusted multinomial logistic regression compared the demographic characteristics of the diagnosis groups. Results: Weighted 12-month prevalence of anxiety alone, depression alone, and comorbid anxiety/depression was 12.7%, 4.9%, and 4.2% respectively for São Paulo, and 12.1%, 4.6%, and 2.7% for Rio de Janeiro. For São Paulo (Rio de Janeiro), 24.9% (18.2%) with anxiety were also depressed, and 46.2% (37.0%) with depression were diagnosed with anxiety. All conditions were approximately twice as prevalent in women than in men in both cities. In São Paulo, comorbidity was associated with age under 60, depression alone was more prevalent among 30-59 year olds, but in 23-29 year-olds in Rio de Janeiro. With rare exception, marital status, education, and race/ethnicity were not associated with anxiety, depression, or their comorbidity. Limitations: Cross – sectional design. Conclusions: Prevalence rates for all conditions were high, and expected gender and age differences were present. Comorbidity-associated differences between cities regarding ages most at risk were present, suggesting that determinants of comorbid anxiety/depression merits increased attention.

No. 46

Weight Loss Strategies and Risk for Depressive Symptoms in Adults in the United States

Poster Presenter: Alexander Chaitoff

Co-Authors: Carol E Swetlik, Catherine Ituarte, Ling-Ling Lee, Adele C. Viguera, M.D., M.P.H.

SUMMARY:

Introduction: Previous studies demonstrate a link between weight loss and mental health status, but little is known about how the different approaches to weight loss may associate with depression risk. Understanding any associations between weight loss strategies and odds of reporting depressive symptoms may inform clinical screening opportunities as well as public health messaging. Methods: The sample included participants from the National Health and Nutrition Examination Survey (NHANES) from 2005-2014 who reported attempting to lose weight over the past year. NHANES is a cross-sectional survey that utilizes a complex, multistage, clustered probability method to provide nationally representative estimates. Participants completed a PHQ-9 Depression Scale and participants reported on 19 possible weight loss strategies utilized. Based on previous classification schemes in the literature, participants' weight loss strategies were then grouped as either unhealthy or neutral/healthy. Of the 19 strategies, five were classified as unhealthy strategies, including smoking, using laxatives/vomiting, skipping meals, taking non-prescription supplements, and taking prescription diet pills. Chi-square tests were used to explore bivariate associations between the self-reported weight loss strategies and depressed mood (PHQ=10). A logistic regression model was used to characterize the associations between reporting the use of at least one unhealthy weight loss strategy and the odds of reporting depressive symptoms after adjusting for multiple demographic, health, and weight variables. Finally, a sensitivity analysis excluding prescription diet pills as an unhealthy

weight loss strategy was conducted. Results: Our sample included 6829 subjects, representing 59.7 million US adults. Of these subjects, 28.2% (n=1,561) reported using at least one unhealthy weight loss strategy. In bivariate analysis, unhealthy weight loss strategies were positively associated with depressive symptoms, including skipping meals (OR=1.92, 95% CI=1.47-2.51, p<0.001), taking laxatives/vomiting (OR=3.35, 95% CI=1.65-6.81, taking non-prescription weight loss supplements (OR=2.07, 95% CI=1.49-2.87, and taking prescription diet pills (OR=2.78, 95% CI=1.69-4.59, p<0.004). Exercise was the only weight loss strategy negatively associated with depression (OR=0.53, 95% CI=0.43-0.66, p<0.001). In multivariable analysis, using at least one unhealthy weight loss strategy was positively associated with depressive symptoms in both the original model (OR=1.48, 95% CI=1.14-1.92, p=0.003) and the sensitivity analysis (OR=1.53, 95% CI=1.17-1.99, p=0.001). Conclusions: Certain weight loss strategies are associated with increased odds of depressive symptoms. The connection between these behaviors and depression might inform public health messaging and suggest the need for reinforcement of clinical screening opportunities for depression, particularly in healthcare settings where weight loss efforts

No. 47

Interrelationships of Adverse Childhood Experiences, Stroke, and Depression Among BRFSS Respondents

Poster Presenter: Trevor Taylor, B.S.
Co-Authors: Julie Obenauer, M.P.H., Edward Leinaar, B.S., Ifeoma Ozodiegwu, M.P.H., Megan Quinn, D.P.H., M.Sc.

SUMMARY:
Background: Adverse childhood experiences (ACEs) have been associated with stroke and depression, though additional research is needed to substantiate and characterize these relationships. Few investigations have examined the epidemiology of childhood adversity and depressive disorders, as they relate to stroke. To our knowledge, the relationship between ACEs and post-stroke depression (PSD), the most common neuropsychiatric consequence of stroke, has not been explored at all. The primary objectives of this study were to provide an overview of national data on the prevalence of ACEs and to determine variations in likelihood of diagnosed stroke, depression, and co-reported stroke and depression among individuals reporting ACEs. **Methods:** Behavioral Risk Factor Surveillance System (BRFSS) data were used from all states that administered the ACE module in 2011 and 2012, the most recent years available. Simple and multiple logistic regression analyses were conducted. Individual and aggregate effects of ACEs on depression, stroke, and co-reported stroke and depression were assessed, as were associations with behavioral risk factors and demographic characteristics. **Results:** Among 83,688 respondents, the overall weighted prevalence of reported household dysfunction was 44.0%, compared to that of childhood abuse (36.0%). In our analysis, there was no association between ACEs and stroke without depression. Abuse (AOR=1.71, 95% CI [1.51, 1.92]), household dysfunction (AOR=1.53, 95% CI [1.36, 1.73]), and ACE score (AOR=1.23, 95% CI [1.20, 1.27]) were associated with adult depression without stroke, even after adjusting for covariates. Abuse (AOR=2.43, 95% CI [1.60, 3.69]) and household dysfunction (AOR=1.57, 95% CI [1.02, 2.41]) were each associated with co-reported stroke and depression. **Conclusion:** Current data on ACEs were summarized using a large sample from eight U.S. states. ACEs were associated with depression and co-reported stroke and depression. Our results showed no association between ACEs and stroke alone, but demonstrated a stronger association between ACEs and co-reported stroke and depression than with depression alone, suggesting a possible relationship between ACEs and post-stroke depression. These results should encourage further research on the interrelationships between ACEs, stroke, and depression.

No. 48

Long-Term Efficacy, Safety and Tolerability of Adjunctive ALKS 5461 in Patients With Major Depressive Disorder Enrolled in an Ongoing Phase 3 Study

Poster Presenter: Michael Edward Thase, M.D.
Co-Authors: Arielle D. Stanford, M.D., Asli Memisoglu, William Martin, Amy Claxton, Alexander Bodkin, Madhukar H. Trivedi, M.D., Maurizio Fava, M.D., Sanjeev Pathak

SUMMARY:
Background: ALKS 5461, a combination of buprenorphine (a μ-opioid receptor partial agonist and ?-antagonist) and samidorphan (a sublingually-bioavailable μ-opioid antagonist), is a novel treatment approach for major depressive disorder (MDD) intended to address endogenous opioid dysregulation in the context of MDD. ALKS 5461 has shown efficacy versus placebo as adjunctive treatment of MDD in previously reported short-term randomized clinical trials. Building upon previously reported results from the randomized, placebo-controlled, short-term studies, we report long-term efficacy, safety and tolerability for ALKS 5461 as adjunctive treatment from the ongoing, 12-month, open-label ALK5461-208 Study (NCT02141399). Methods: Study ALK5461-208 enrolled patients who participated in 1 of 4 short-term studies: ALK5461-205 (NCT02158533), ALK5461-206 (NCT02158546), ALK5461-207 (NCT02218008), and ALK5461-210 (NCT02085135), as well as de novo patients. All patients had a confirmed diagnosis of MDD and a history of inadequate response to standard antidepressant therapy (ADT). All patients were treated with an adequate dose of an established ADT for at least 8 weeks before initiation of study drug, and although dosage of the ADT could be titrated, no change in ADT was allowed. Patients received sublingual ALKS 5461 2/2 mg as adjunctive treatment for up to 52 weeks in ALK5461-208. Change from baseline in the Montgomery–Åsberg Depression Rating Scale (MADRS-10) was the primary efficacy measure with baseline defined as time of ALKS 5461 initiation (in ALK5461-208 or prior short-term study). Remission, defined as MADRS-10 ?10, was also evaluated using last observation carried forward. Time to remission, defined as time from ALKS 5461 initiation to MADRS-10 ?10, was analyzed using Kaplan-Meier methods. Safety was assessed via adverse events (AEs), vital signs, laboratory analytes, and electrocardiography. Results: From a total of 1454 enrolled patients, 49% completed the 1-year study, 11% discontinued due to an AE, and 3% remain enrolled. Mean MADRS-10 scores decreased from baseline and this decrease was maintained at end of study. Remission rate at 12 months and Kaplan-Meier median time to remission were 52.5% and 59.0 days respectively. AEs occurring with a frequency of ?10% were nausea, headache, constipation, dizziness and somnolence. There was no evidence of withdrawal upon discontinuation of treatment with ALKS 5461. ALKS 5461 was not associated with any changes in laboratory or metabolic parameters, or change in bodyweight. Conclusion: Overall, ALKS 5461 showed durability of antidepressant effect up to 52 weeks of treatment in patients with MDD. ALKS 5461 was well tolerated with an AE profile consistent with that reported in the short-term trials.

No. 49

Clinical Efficacy and Safety of Flexibly Dosed Intranasal Esketamine in a U.S. Population of Patients With Treatment-Resistant Depression

Poster Presenter: May Shawi, Ph.D., M.S.
Lead Author: Larry D. Alphs, M.D., Ph.D.
Co-Authors: Kimberly Cooper, M.S., Vanina Popova, M.D., H. Lynn Starr, M.D., Allitia DiBernardo, M.D., Carol Jamieson, David Hough, M.D., Jaskaran Singh, M.D.

SUMMARY:
Objective: To compare the efficacy and safety of intranasal esketamine plus a new oral antidepressant (AD) with intranasal placebo plus a new oral AD (active comparator) for rapid reduction in symptoms of depression in individuals with major depressive disorder living in the United States who had not benefited from at least 2 pharmacological treatments for treatment-resistant depression (TRD). Methods: In this post hoc analysis of a double-blind (DB), flexibly dosed, multinational, multicenter study (NCT02133002), 91 US patients with TRD were randomized 1:1 to intranasal esketamine 56 or 84 mg plus oral AD or to intranasal placebo plus oral AD (active comparator) twice weekly for 4 weeks. The Montgomery-Åsberg Depression Rating Scale (MADRS) was assessed at baseline; 24 hours; days 8, 15, and 22; and 4-weeks post–initial dose. The Clinical Global Impression of Severity (CGI-S) scale was assessed at baseline; days 4, 8, 11, 15, and 22; and 4-weeks post–initial dose. The Sheehan Disability Scale (SDS) and Patient Health Questionnaire-9 (PHQ-9) were assessed at baseline, day 15, and 4-weeks post–initial dose to capture changes in patient-reported symptoms of depression and functioning. Results: In 90 US patients analyzed

(1 did not dose), improvement in MADRS total score with intranasal esketamine plus oral AD vs intranasal placebo plus oral AD (active comparator) observed at ~24-hours postdose was (least squares [LS] mean difference [SE]) –1.6 [2.15; p=0.225] and at DB endpoint was (LS mean difference [SE]) –5.5 [2.58; p=0.017]. The analysis of covariance based on the ranks of change showed a statistically significant difference between the 2 treatment groups in improvement of severity of depressive illness as measured by the CGI-S at day 4 (p=0.015) and approached significance at DB endpoint (p=0.070). Differences in mean changes in SDS and PHQ-9 were (LS mean difference [SE]) –4.7 [2.14; p=0.015] and –2.9 [1.53; p=0.033], respectively, at DB endpoint. Results for these analyses favored intranasal esketamine. Adverse events occurring in at least 10% of patients in the intranasal esketamine plus oral AD group relative to the intranasal placebo plus oral AD group were dizziness, nausea, dysgeusia, headache, throat irritation, vertigo, nasal discomfort, feeling abnormal, dissociation, hypoesthesia, insomnia, and paresthesia. Conclusions: Intranasal esketamine plus oral AD compared with intranasal placebo plus oral AD (active comparator) demonstrated a clinically meaningful, statistically significant rapid reduction of depressive symptoms in US patients with TRD. In addition, intranasal esketamine plus oral AD was safe and well tolerated. Support: Janssen Scientific Affairs, LLC

No. 50

Clinical Response, Remission, and Safety of Flexibly Dosed Intranasal Esketamine in a U.S. Population of Patients With Treatment-Resistant Depression

Poster Presenter: May Shawi, Ph.D., M.S.
Co-Authors: Larry D. Alphs, M.D., Ph.D., Vanina Popova, M.D., Kimberly Cooper, M.S., H. Lynn Starr, M.D., Allitia DiBernardo, M.D., Carol Jamieson, David Hough, M.D., Jaskaran Singh, M.D.

SUMMARY:

Objective: To compare the response, remission, and safety of intranasal esketamine plus a new oral antidepressant (AD) medication with intranasal placebo plus a new oral AD medication (active comparator) in individuals with major depressive disorder (MDD) living in the United States who had not benefited from at least 2 pharmacological treatments for treatment-resistant depression (TRD). Methods: In this post hoc analysis of a double-blind, flexibly dosed, multinational, multicenter study (NCT02133002), 91 US patients with TRD were randomized 1:1 to intranasal esketamine (56 or 84 mg) plus oral AD or intranasal placebo plus oral AD (active comparator) twice weekly for 4 weeks. Response (defined as 50% decrease in Montgomery-Åsberg Depression Rating Scale [MADRS] baseline score) and remission (a MADRS score of <=12) were assessed at 24 hours; days 8, 15, and 22; and the 4-week double-blind endpoint. Results: In this population of 90 US patients (1 patient did not dose), responses with intranasal esketamine plus oral AD vs intranasal placebo plus oral AD (active comparator) observed at ~24-hours postdose were 11/43 (25.6%) for patients in the intranasal esketamine plus oral AD group vs 9/40 (22.5%) in the intranasal placebo plus oral AD group. Responses at 4-weeks postdose were 26/40 (65.0%) for patients in the intranasal esketamine plus oral AD group vs 15/38 (39.5%) in the intranasal placebo plus oral AD group. Remission rates at ~24-hours postdose were 6/43 (14.0%) for patients in the intranasal esketamine plus oral AD group vs 4/40 (10.0%) patients in the intranasal placebo plus oral AD group. Remission rates at 4-weeks postdose were 18/40 (45.0%) patients in the intranasal esketamine plus oral AD group vs 9/38 (23.7%) patients in the intranasal placebo plus oral AD group. The most common adverse events for intranasal esketamine plus oral AD relative to the intranasal placebo plus oral AD group were dizziness, nausea, dysgeusia, headache, throat irritation, vertigo, nasal discomfort, feeling abnormal, dissociation, hypoesthesia, insomnia, and paresthesia. The incidence of these events was similar between the US patients and the total study population. Conclusions: Intranasal esketamine plus oral AD compared with intranasal placebo plus oral AD (active comparator) demonstrated clinically meaningful improvements in depressive-symptom response and remission among US patients with TRD. Safety and response/remission results of patients from the US treatment environment were similar to those found for the total population studied. Support: Janssen Scientific Affairs, LLC

No. 51

Clinical Response, Remission, and Safety of Intranasal Esketamine in a U.S. Population of Geriatric Patients With Treatment-Resistant Depression

Poster Presenter: H. Lynn Starr, M.D.
Lead Author: Larry D. Alphs, M.D., Ph.D.
Co-Authors: Rachel Ochs-Ross, M.D., Yun Zhang, Ph.D., Jaskaran Singh, M.D., Pilar Lim, Ph.D., Rosanne Lane, M.A.S., Allitia DiBernardo, M.D., May Shawi, Ph.D., M.S., David Hough, M.D.

SUMMARY:
Objective: To compare the safety and efficacy of intranasal esketamine plus a new oral antidepressant (AD) with intranasal placebo plus a new oral AD (active comparator) in geriatric patients with major depressive disorder (MDD) living in the United States who had not benefited from at least 2 pharmacological treatments for treatment-resistant depression (TRD). Methods: In this post hoc analysis of a subset of a double-blind, flexibly dosed, multinational, multicenter study (NCT02133005), 70 US geriatric patients with TRD were randomized 1:1 to intranasal esketamine 28/56/84 mg plus a new oral AD or intranasal placebo plus a new oral AD (active comparator) twice weekly for 4 weeks. Response (defined as a 50% decrease in Montgomery-Åsberg Depression Rating Scale [MADRS] baseline score) and remission (defined as a MADRS score <=12) were measured at intervals until the 4-week double-blind endpoint. Results: In this subpopulation of 70 US geriatric patients, 8/30 (26.7%) patients treated with intranasal esketamine plus oral AD vs 5/34 (14.7%) patients treated with intranasal placebo plus oral AD (active comparator) had a response to treatment at 4 weeks. Remission rates at 4-weeks postdose were 5/30 (16.7%) patients treated with intranasal esketamine plus oral AD vs 1/34 (2.9%) patients treated with intranasal placebo plus oral AD. All results favored intranasal esketamine. The most common adverse events for intranasal esketamine plus oral AD were dysphoria, fatigue, headache, insomnia, nausea, abdominal discomfort, cough, dizziness, erythema, nasal congestion, urinary tract infection, and vomiting. The incidence of adverse events in the US patients was similar to that observed in the overall study population. Conclusions: In this subpopulation of US geriatric patients with TRD from a larger, multinational study, almost twice as many patients showed a 50% response when treated with intranasal esketamine plus oral AD compared with those treated with intranasal placebo plus an oral AD (active comparator). In addition, remission rates were approximately 5-fold greater in patients treated with intranasal esketamine plus oral AD compared with patients treated with intranasal placebo plus oral AD. The safety, response, and remission results of US patients were similar to those found for the total population studied.
Support: Janssen Scientific Affairs, LLC

No. 52

Clinical Efficacy and Safety of Intranasal Esketamine in a U.S. Population of Geriatric Patients With Treatment-Resistant Depression

Poster Presenter: H. Lynn Starr, M.D.
Lead Author: Larry D. Alphs, M.D., Ph.D.
Co-Authors: Rachel Ochs-Ross, M.D., Yun Zhang, Ph.D., Rosanne Lane, M.A.S., Pilar Lim, Ph.D., Jaskaran Singh, M.D., Allitia DiBernardo, M.D., May Shawi, Ph.D., M.S., David Hough, M.D.

SUMMARY:
Objective: To evaluate the safety and efficacy of flexibly dosed intranasal esketamine plus an oral antidepressant (AD) compared with intranasal placebo plus an oral AD (active comparator) to improve symptoms of depression among geriatric patients with major depressive disorder living in the United States who had not benefited from at least 2 pharmacological treatments for treatment-resistant depression (TRD). Methods: In this double-blind (DB), flexibly dosed, multinational, multicenter study (NCT02133005), 70 US geriatric patients with TRD were randomized 1:1 to intranasal esketamine 28/56/84 mg plus oral AD or to intranasal placebo plus oral AD (active comparator) twice weekly for 4 weeks. The primary efficacy endpoint, compared between treatment groups, was the difference between the Montgomery-Åsberg Depression Rating Scale (MADRS) score at baseline and after 4 weeks of treatment. Secondary efficacy measures were Clinical Global Impression of Severity (CGI-S), Sheehan Disability Scale (SDS), and Patient Health Questionnaire-9 (PHQ-9), which assessed changes in general clinical condition and function. Results: In this subpopulation of 70 US geriatric patients,

statistically significant improvement in MADRS total score was observed with intranasal esketamine plus oral AD vs intranasal placebo plus oral AD (active comparator) at DB endpoint utilizing the mixed-effects model using repeated measures analysis (least squares [LS] mean difference [SE]: –5.4 [2.48]; 1-sided p=0.016). The analysis of covariance based on ranks of change between the 2 groups in improvement of severity of depressive illness as measured by the CGI-S achieved significance at DB endpoint (1-sided p=0.005). Differences in mean changes in SDS and PHQ-9 were (LS mean difference [SE]) –7.6 [2.68; 1-sided p=0.004] and –4.4 [1.68; 1-sided p=0.006], respectively, at DB endpoint. All results favored intranasal esketamine. The most common adverse events for the intranasal esketamine plus oral AD group were dysphoria, fatigue, headache, insomnia, nausea, abdominal discomfort, cough, dizziness, erythema, nasal congestion, urinary tract infection, and vomiting. The incidence of adverse events in this geriatric population of US patients was similar to the incidence in the overall study population and in younger individuals. Conclusions: Intranasal esketamine plus oral AD compared with intranasal placebo plus oral AD (active comparator) demonstrated a clinically meaningful, statistically significant reduction of depressive symptoms and an improvement in overall severity of depressive illness and in health-related quality of life and functioning in geriatric US patients with TRD at 4 weeks. Safety results of geriatric patients from the US treatment environment were similar to those found for the younger population in the esketamine phase 3 study and in the phase 2 studies. Support: Janssen Scientific Affairs, LLC

No. 53

Characterizing the Prevalence and Characteristics of Major Depressive Disorder (MDD)-Related Hospitalizations in U.S. Patients Diagnosed With MDD

Poster Presenter: Amy Tung
Co-Authors: Degang Wang, Thais Moreira, Kenneth Kramer

SUMMARY:
OBJECTIVES: Major Depressive Disorder (MDD) is a chronic, relapsing, and burdensome disease that can lead to hospitalizations and/or suicide without adequate treatment. To adequately understand the economic burden of this disease, it is important to identify the prevalence of MDD-related hospitalizations among MDD patients. This study aims to characterize the prevalence of MDD-related hospitalizations among adult and adolescent patients with MDD in the US, as well as describe the clinical characteristics, length of stay, and cost of stay of MDD-related hospitalizations. METHODS: A retrospective analysis was conducted using healthcare claims from the Truven MarketScan® Research Databases. Adults (age >=18) and adolescents (age 12-17) with a prevalent MDD diagnosis (International Classification of Diseases, 9th Revision, Clinical Modification [ICD-9-CM] diagnosis code 296.2, 292.3, or 311) between January 1, 2013 and December 31, 2013 were identified. Prevalence of hospitalizations with a primary diagnosis of MDD during this study period was calculated for both adult and adolescent cohorts using patient-level data. In addition, clinical characteristics, length of stay, and costs of stay of MDD-related hospitalizations were analyzed for each age group using encounter-level data. RESULTS: Prevalence of MDD-related hospitalizations among adult patients with MDD was 4% (34,379/859,479), and among adolescent patients with MDD was 14.5% (12,301/84,832). Most adult and adolescent hospitalizations for MDD were accompanied by comorbid anxiety (73% and 80%, respectively) or substance use disorders (52% and 64%, respectively). Nearly half of MDD-related hospitalizations were associated with suicide ideation or attempt (40% among adult encounters and 48% among adolescent encounters). Mean (SD) length of stay was 5.9 (6.2) days for adult encounters and 6.9 (11.3) days for adolescent encounters. Mean (SD) cost of stay was $8,441 ($11,976) and $8,442 ($10,833) for adult and adolescent encounters, respectively. CONCLUSIONS: MDD hospitalizations are associated with long stays and high costs among adult and adolescent patients in the US. However, current medications approved to treat MDD have slow onsets, low remission rates, and a high side-effect burden. Newer treatments for MDD with novel mechanisms that work faster may be able to reduce hospitalizations in patients with MDD.

No. 54

Randomized, Double-Blind Study of Flexibly-Dosed Intranasal Esketamine Plus Oral Antidepressant Versus Active Control in Treatment-Resistant Depression

Poster Presenter: Vanina Popova
Co-Authors: Ella Daly, Madhukar H. Trivedi, M.D., Kimberly Cooper, M.S., Rosanne Lane, M.A.S., Pilar Lim, Ph.D., Christine Mazzucco, David Hough, M.D., Michael Edward Thase, M.D., Richard Shelton, Patricio Molero, Eduard Vieta, M.D., Ph.D., Malek Bajbouj, Husseini Manji, M.D., Wayne Drevets, M.D., Jaskaran Singh, M.D.

SUMMARY:
Background: About 30% of the patients with major depressive disorder (MDD) fail to achieve remission despite treatment with multiple antidepressant medications, and are considered to have treatment-resistant depression (TRD). Methods: This was a Phase 3, double-blind, active-controlled, multicenter study (NCT02418585) using blinded raters, conducted at 39 sites in Spain, Germany, Czech Republic, Poland, and the United States from August 2015 to June 2017. The study enrolled adults with moderate-to-severe, non-psychotic, recurrent or persistent depression, and history of non-response to =2 antidepressants in the current episode of depression, with 1 of them assessed prospectively. Non-responders were randomized (1:1) to flexibly-dosed intranasal esketamine (56 or 84 mg twice weekly) and a new oral antidepressant or intranasal placebo and a new oral antidepressant. The primary efficacy endpoint – change from baseline to endpoint (day 28) in Montgomery-Asberg Depression Rating Scale (MADRS) total score – was assessed among patients who received =1 dose of (intranasal and oral) study medication by mixed-effects model using repeated measures. Remission rate, a secondary endpoint, was assessed using Generalized Cochran-Mantel-Haenszel (CMH) test, adjusting for country and class of oral antidepressant (SNRI or SSRI) as a post hoc analysis. Results: 435 patients were screened, 227 randomized, and 197 completed the double-blind period. Change (LS mean [SE] difference vs. placebo) in MADRS total score with intranasal esketamine and oral antidepressant was superior to oral antidepressant and intranasal placebo at day 28 (-4.0 [1.69], 95% CI: -7.31, -0.64; one-sided p=0.010), as well as at earlier timepoints (one-sided p=0.009 at 24 hours postdose and days 8 and 22). Remission rate (MADRS total score =12) at day 28 was 52.5% (53/101) and 31.0% (31/100) for the respective groups (one-sided p=0.001). The most common adverse events reported for the esketamine plus oral antidepressant group were dysgeusia, nausea, vertigo, and dizziness; the incidence of each (20.9-26.1%) was >2-fold higher than for the oral antidepressant plus intranasal placebo group. Conclusions: Robust efficacy of intranasal esketamine and superiority to an active comparator were demonstrated on the primary efficacy endpoint result. More than half of the esketamine-treated TRD patients achieved remission by the 4-week endpoint. Favorable safety and tolerability of intranasal esketamine reported in this study suggest a positive risk-benefit profile of intranasal esketamine.

No. 55

Capgras Delusion or Haunted by a Dybbuk?: A Case Report

Poster Presenter: Winnie Chu
Co-Authors: Jamie Mathew Cherian, Robert D. Colucci, D.O.

SUMMARY:
Objective: Report a case of Capgras delusions in a patient with a longstanding history of psychiatric disorders. Background: Capgras syndrome is a delusional misidentification disorder. Patients who experience this believe that familiar people (in some cases animals and inanimate objects) have been replaced with imposters. Capgras syndrome is most commonly caused by Alzheimer's disease and dementia, and can also be seen in schizophrenia, epilepsy and certain cases of brain injury. In Jewish folklore, a Dybbuk is an evil spirit of a deceased individual who inhabits and controls the body of a living person, causing them to perform mischievous acts. In this poster, we discuss a patient who presented with Capgras delusion, believing that her friend was replaced by what she explicitly refers to as a Dybbuk. Case: The patient is a 54-year-old female with past psychiatric history of major depressive disorder, PTSD and ADHD. She presented to the emergency department and was ultimately

admitted to our psychiatric unit under voluntary status due to worsening depression, mood swings, insomnia, auditory hallucinations, and delusional thinking for the past three months. Auditory hallucinations were derogatory in nature and consistently told the patient that she would go to jail and remain there forever, never to die. Patient also believed that her best friend had been replaced by a "Dybbuk," her deceased father's spirit. A mutual acquaintance reassured the patient that her friend was not an imposter. Although the patient agreed that the "imposter's" mannerisms and way of speaking were similar to her friend's, and dissimilar to her father's, she still harbored doubts. The patient was placed on Zyprexa 5 mg by mouth daily to augment mood, Haldol 5 mg by mouth as-needed for psychosis and Benadryl 50 mg by mouth as-needed for insomnia. Patient's Geodon was titrated to 80 mg by mouth twice a day for psychosis and mood stabilization. She was also continued on Prozac 40 mg by mouth daily and Effexor 150 mg by mouth daily for depression and anxiety. During this time, patient responded positively to medication and therapeutic milieu. Patient reported marked improvement in auditory hallucinations and mood stabilization. After phone calls, the patient reported feeling more assured that the person she spoke to was truly her friend. Patient was discharged back to her home with a plan for outpatient follow-up. Conclusion: This case is unique in the development of Capgras delusion during an episode of major depression with psychotic features, and most importantly, the patient's use of the Jewish phenomenon "Dybbuk" to understand her delusion. This case exem

No. 56

Sexual Function in Major Depressive Disorder and Persistent Depressive Disorder: A Systematic Review

Poster Presenter: Walter Gonçalves, M.D.
Co-Authors: Arnaldo Cascardo Neto, M.D., Jose Carlos Appolinario, M.D., Ph.D., Antonio E. Nardi, M.D., Ph.D.

SUMMARY:
Introduction: Depression is a psychiatric disorder of high prevalence in the population and is often associated with sexual dysfunction (SD). Among the depressive disorders, the major depressive disorder (MDD) and dysthymia are the most studied diagnostic categories. Objective: To compile the available data on the evaluation of sexual function and/or sexual dysfunction in patients with MDD and/or Dysthymia without pharmacological and psychotherapeutic treatment. Methods: We perform a systematic review of the literature. Using pre-defined criteria and standardized search terms, an electronic search was conducted in the MedLine database for studies that evaluated sexual function/dysfunction in samples of patients with MDD and Dysthymia. We included studies published up to June 2017. In addition to the electronic search, relevant articles present in the articles references were manually searched and included in this review. Results: Twenty-one studies were eligible for analysis in this systematic review. 13 were experimental studies and only one was aimed to evaluate Dysthymia. It was observed a variety of results due to different methods of evaluation. However, a reduction of the main sexual functions such as: libido (31-32%), drive (31-87%), arousal (29-85%), erection (18-46%), lubrication (18-79%) and orgasm (26-81%) was perceived. Increase of libido (15-22%) were also present in some studies in this population. Conclusion: Several sexual functioning alterations were observed in this study population. Prevalence discrepancies occurred probably due to the varied methodologies used in the studies.

No. 57

Antidepressants Treatment Induced Brain Three Vital Networks Changes in Patients With Major Depressive Disorder: A Longitudinal Study

Poster Presenter: Xiao Yang

SUMMARY:
INTRODUCTION: Major depressive disorder (MDD) is a severe mental illness, with high prevalence?relapse rate(Kessler, Berglund et al. 2003, Lepine and Briley 2011). Thus prevention and treatment of depression must be seen as a priority medical challenge for psychiatrists. Most drugs pharmacologically affected on monoamine levels, such as serotonin in specific brain areas (Rapaport 2009). Most of what we know about the effects of antidepressant are at the receptor level, the underlying mechanisms by which the biochemical changes induced by drug could be

translated into clinically helpful effects are still poorly understood (Wang, Xia et al. 2015). The neuroimaging findings may probably be used for monitoring treatment response and predicting the clinical outcome of patients after treatment. Recent evidence suggests that some brain areas act as hubs interconnecting distinct, functionally specialized systems in treating the disease (Wang, Xia et al. 2015). The triple network model, consisting of the central executive network (CEN), salience network (SN) and default mode network (DMN), has been recently employed to understand dysfunction in core networks across various mental disorders(Menon 2011). Methods: 31 drug free patients were enrolled in this study and followed up after the antidepressants treatments. 31 age, gender and education year matched healthy controls were recruited by poster advertisement and followed up. Resting-state functional MRI images were obtained on a 3.0 T whole MR scanner at the baseline as well as the follow up. We calculated the degree centrality (DC) for every participant. For each voxel, the BOLD time course was extracted and correlated with every other voxel in the brain for each participant. For a given node i in a weighed graph, it is computed as the sum of weights over these edges by thresholding at $r > 0.25$ which provides a more precise centrality feature of functional brain networks by taking connection weights into consideration(Cole, Pathak et al. 2010). Results: Prominent hubs were located within cerebellum, inferior temporal gyrus (ITG), lingual gyrus (LG), and medial/lateral prefrontal gyrus (Figure 1a). Furthermore, network analysis revealed that many, but not all, hubs were located in the dorsal medial prefrontal gyrus (DMPFC), ITG, anterior insula and dorsal lateral prefrontal gyrus, all of which are components within the default mode, salience and central executive networks (Figure 1b, 1c). The DC changes in the left DMPFC and the functional connectivity changes between the left LG seed and the right ITG both showed significant positive correlations with the symptomatic improvements indicated (Figure 2a, 2b). Conclusions: The three vital brain networks, including CEN, SN and DMN involved the antidepressant effects in depression and the brain activities changes in the left DMPFC may probably be used for monitoring treatment response and predicting the clinical outcome of patients after treatment.

No. 58

Health Care Resource Use and Cost Associated With Treatment Optimization in Major Depressive Disorder in the United States: A Real-World Study

Poster Presenter: Roger S. McIntyre, M.D.
Co-Authors: Ahmed Shelbaya, M.D., M.P.H., Yu-Chen Yeh, Elizabeth Pappadopulos, Matthieu Boucher, Richard Chambers, Rita Prieto, Xin Gao, Ph.D.

SUMMARY:

BACKGROUND: Despite well-established treatments for major depressive disorder (MDD), many patients fail to achieve adequate response and remission. Guidelines recommend the use of selective serotonin reuptake inhibitors (SSRI) and serotonin norepinephrine reuptake inhibitors (SNRI) as first-line treatments for MDD and emphasize the importance of early treatment optimization as a key to treatment success. OBJECTIVES: To compare MDD-related healthcare resource utilization (HCRU) and cost between patients who achieved guideline-recommended minimum therapeutic dose (MTD) of SSRI/SNRI early and those who achieved MTD late. METHODS: The Truven Health Analytics MarketScan Commercial and Medicare supplement database (2010-2015) was used to extract a cohort of adult patients whose initial MDD diagnosis (index) was made in an outpatient setting and who were newly treated with SSRI or SNRI within 12 months after the initial diagnosis. Patients who received other antidepressants before or at the time of the first SSRI/SNRI prescription were excluded. Patients who reached MTD within 4 weeks of index date were defined as early MTD achievers; the remaining patients were late MTD achievers. MDD-related HCRU and costs per year after the index date were compared between early and late achievers using Wilcoxon rank-sum tests for continuous variables after propensity score (PS) adjustment on demographic and clinical characteristics. Generalized linear models (GLM) were also developed using the PS-matched cohorts with further adjustment for pre-index HCRU as a proxy for general health status. RESULTS: A total of 55,539 patients were included in the analysis, 60.9% were early MTD achievers. The average age was 40.4 years old and 68.1% were female. The median time to achieve MTD was 2 weeks from the index date. After PS matching, mean

number of MDD-related outpatient visits per year were significantly higher for late MTD achievers compared to early achievers (6.5 vs. 4.5, p<0.001). Mean MDD-related outpatient cost ($758 vs. $568, p<0.001) and total cost ($1,232 vs. $994, p<0.001) per year were significantly higher while cost for emergency department was slightly lower ($4 vs. $5, p=0.009) for late MTD achievers compared to early achievers. GLM analysis showed similar results for number of outpatient visits and late achievers had significantly lower MDD-related inpatient, outpatient, drug and total costs (p<0.001 for all). CONCLUSIONS: This study suggests that early achievement of MTD among patients treated with SSRI/SNRI was associated with reduced MDD-related outpatient visits and costs. There is an opportunity to improve outcomes by treating MDD patients with SSRI/SNRI at the MTD or above rapidly, within 4 weeks of diagnosis or less. This study was sponsored by Pfizer Inc.

No. 59

Clinical Predictors of Remission in a Sample of Elderly With Major Depression

Poster Presenter: Salma Ribeiz
Co-Authors: Lucas Alves, Geraldo Busatto, Clóvis Alexandrino-Silva

SUMMARY:

Objective: To investigate possible baseline predictors of remission in a preliminary sample of elderly depressed patients treated according to a modified version of the STAGED (a guideline for pharmacological treatment for depression in the elderly) approach. Methods: Eighty one depressed individuals were treated according to STAGED over 24 weeks in a prospective cohort design with follow up. All patients had criteria for major depression and were at least 60 years of age at baseline enrollment. Results: During this follow up fifty two patients could be classified in remitted or not remitted group, 44.2% reached remission. Only baseline MADRS scores were variables with statistical significance (p <0.05) differences between remitted and not remitted patients. It may mean that patients with more severe depressive symptoms may have a worse course of depression. Conclusion: This modified version of STAGED seems to be a useful strategy for the treatment of depression in late life. Baseline depressive symptoms may be useful to predict remission of depression in elderly patients with mild to moderately severe depression.

No. 60

Geographic Diversity of Prevalence and Predictors of Postpartum Depression in the United States: A Nationally Representative Population-Based Study

Poster Presenter: Sara L. Johansen
Co-Authors: Ben Stenhaug, Mark R. Cullen, M.D.

SUMMARY:

Background: Postpartum depression remains one of the most common morbidities of pregnancy, and yet, our understanding of the geographic diversity of postpartum depression and treatment in the United States remains a pertinent question. The widely cited prevalence of 10% is based on national survey-based studies that do not account for regional variation and diversity across communities in the United States. We conducted a population-based cohort study of 336,522 women using national commercial insurance claims data to estimate the prevalence and identify predictors of postpartum depression and treatment in the United States at the 3-digit zip code level. Methods: Women of reproductive age (14 to 50 years) with a single pregnancy ending in live birth between 2003 and 2016 and continuous insurance coverage for at least 6 months before and after pregnancy were eligible for inclusion. The primary outcome was postpartum depression, defined by depression diagnosis up to one year following delivery. The secondary outcome was treatment, defined by at least one antidepressant medication dispensed in the postpartum period. We assessed the impact of a variety of predictors on postpartum depression, including socioeconomic variables, complications of pregnancy and delivery, and prior mental health conditions. Independent associations between predictors and postpartum depression were assessed by multiple variable logistic regression analysis. Regional variation in postpartum depression and treatment was evaluated based on 3-digit zip codes. All data was obtained from the Optum ClinformaticsTM Data Mart Database (OptumInsight, Eden Prairie, MN), a de-identified database from a large national insurance provider. All medical procedures and diagnoses were

identified by the diagnostic classification system International Classification of Disease, Clinical Modification, Ninth Revision (ICD-9-CM) and Tenth Revision (ICD-10-CM). Results: Among the total study population (n = 336,522), the prevalence of postpartum depression was 9.4% (n = 31,610) and 13.2% (n = 44,511) of women received antidepressant treatment in the postpartum period. Women of younger age (14 to 20 years), women delivering by Caesarean section, and women with prior mental health conditions including anxiety disorders, panic disorder, obsessive-compulsive disorder, post-traumatic stress disorder, and eating disorders were significantly more likely to be diagnosed with postpartum depression ($p<0.05$). Mapping rates of postpartum depression diagnosis and treatment indicated regional differences with clustering in urban areas based on 3-digit zip code. Conclusions: Postpartum depression prevalence as assessed by this national commercial insurance claims data is consistent with the widely reported prevalence of approximately 10%, and we identify regional variation in diagnosis and treatment rates with clustering in urban areas. Women who are under age 20, deliver by Caesarean section, or who have a history of mental health conditions should be specifically targeted for postpartum depression screening and treatment.

No. 61

Prevalence of Anxiety and Depression in Patients With Post-Treatment Lyme Disease

Poster Presenter: Ellen Brown, B.A.
Co-Authors: Shreya Doshi, Brian A. Fallon, M.D.

SUMMARY:
Objective: Anxiety and depression are prevalent symptoms in many infectious diseases. Acute and later stages of Lyme disease have also been associated with psychiatric conditions such as depression, anxiety, and psychosis. This study investigates the prevalence of anxiety and depression in groups of individuals with post-treatment Lyme disease symptoms. Additionally, factors that can predict functional impairment in this sample are examined. Method: Individuals with Lyme disease were retrospectively categorized into two groups- those with definite Post-Treatment Lyme Symptoms (PTLS) (n=102) and those with probable PTLS (n=60). Depression and anxiety were assessed using the Beck Depression Inventory- I (BDI-I) and the Zung Self- Rating Anxiety Scale (SAS), respectively. In our analyses, a BDI-I score greater than 18 indicated moderate-severe depression and a score greater than 59 on the SAS represented marked-extreme anxiety. Regression models were developed to predict the mental composite score (MCS) and physical composite score (PCS) of the Short Form-36 (SF-36) from various predictors like Gender, Age, BDI-I Total Scores, SAS Total Scores, Psychiatric Medication Use, Time Since Diagnosis and Length of Antibiotic Use, Scores on Fatigue Severity Scale (FSS) and McGill Pain VAS (MP-VAS). Results: Among the definite PTLS group, 14.70% (n=15) had moderate-severe depression alone, 8.82% (n=9) had marked to extreme anxiety alone, and 16.67% (n=17) had both moderate-severe depression and marked-severe anxiety. Among the probable PTLS group, 23.33% (n=14) had moderate-severe depression alone, 21.67% (n=13) people had marked-extreme anxiety alone, and 3.33% (n=2) had both moderate-severe depression and marked-severe anxiety. Factors that predicted the PCS were scores on the FSS and scores on the MP-VAS, while the MCS was predicted by the scores on the SAS and MP-VAS. Conclusion: Given that approximately 43% of our sample have scores indicative of depression and/or anxiety, it is imperative that physicians focus not only on the physical sequelae of Lyme disease but also on concomitant anxiety and depression. While attention has previously been given to depression as a common component of post-treatment Lyme disease symptoms, little attention has been paid to concomitant anxiety. Our study demonstrates a high rate of anxiety among these patients and highlights the role of anxiety as a significant contributor to mental functioning. A comprehensive treatment plan for these patients would include addressing both somatic as well as depressive and anxiety symptoms.

No. 62

Subcutanenous Ketamine and Electroconvulsive Therapy for Treatment-Resistant Depression With Psychotic Features and Endometriosis: A Case Report

Poster Presenter: Sérgio Barros

SUMMARY:

A 42-year-old female patient, single, was referred to an academic mood disorders outpatient unit with a diagnosis of severe treatment resistant unipolar depression (TRD) with psychotic features and chronic pain due to endometriosis. Endometriosis was diagnosed in 2005 and treated with contraceptives, without any improvement. After one year gestodene-ethinylestradiol association was prescribed and she had only partial pain response, pelvic and lower abdominal pain persisted with depressed mood and lack of energy. Pain symptoms exacerbations became more frequent over the time and led to absenteeism at work until January 2015, when she stopped working. After that, depressive symptoms worsened, with isolation, irritability, anxiety, hypersomnia, decreased appetite and suicidal ideation. By January 2016 she presented self-reference delusions and auditory hallucinations and pelvic pain worsened (scored 8-10/10 on visual analog pain scale).Prior to referral to mood outpatient unit, in July 2016, she was treated with fluoxetine-olanzapine combination with no response and had no improvement with venlafaxine (up to 375 mg/day). Augmentation strategies with atypical antipsychotics and mood stabilizers (aripiprazole, risperidone, lithium) didn't show any improvement, both in depressive and psychotic symptoms. In March 2017, due to lack of response, symptoms severity and suicide risk electroconvulsive therapy (ECT) was started and after 7 sessions she showed no improvement. In August 2017 she entered a treatment protocol, with a Montgomery-Asberg Depression Scale (MADRS) score of 42 points, that includes one initial intravenous ketamine infusion (0.5mg/kg over 40 minutes) followed by a weekly subcutaneous ketamine injection (ascending dose of 0.5 mg/kg to 1,0 mg/kg). After the forth ketamine injection without reduction in depressive symptoms she underwent an alternating treatment with bilateral ECT (twice a week) and subcutaneous ketamine injection (once a week). At the end of week 6, after 12 ECT treatments and 7 ketamine injections she had significant reduction of depressive symptoms (MADRS baseline 42, MADRS final score 8), remission of psychotic symptoms, suicidal ideation and pain. Conclusion: In the case described here, a TRD patient with psychotic features and endometriosis with chronic pelvic pain was successfully treated with alternating bilateral ECT and repeated subcutaneous ketamine injection. The subcutaneous route of administration is a promising method for ketamine treatment in TRD, with a favorable efficacy/ side-effect profile. After numerous failed antidepressant trials, including ECT and ketamine alone, this case report may therefore encourage clinicians to extend therapeutic interventions in severe TRD.

No. 63

Evaluation of Psychometric Properties of the PROMIS Scales in Taiwan

Poster Presenter: Ay-Woan Pan, Ph.D.

SUMMARY:

Background: Patient-reported outcome (PRO) is recognized as an important mean to measure patients' quality of life. The Patient-Reported Outcomes Measurement Information System (PROMIS) contains comprehensive PRO measures that have been validated on a wide variety of populations. Collaborating with the international PROMIS group, we have translated five measures into traditional Chinese using well-established guidelines: Depression (28 items), Anxiety (29 items), Anger (22 items), Sleep disturbance (27 items), and Sleep-related impairment (16 items). Though linguistic sound, their psychometric properties have not been established. The purpose of this study is to evaluate the psychometric properties of these five measures in patients with and without mental disorders in Taiwan. Methods: Three hundred and nine community sample, who did not report any mental illness conditions were recruited (mean age 27.8±9.48 years, range 15-62 years). The subjects with mental disorders were recruited from mental health clinics and community based residential settings. Two hundred and forty-eight subjects with mental disorders (mean age 48.8±11.28 years, range 20-70 years) were recruited from mental health clinics and community based residential settings (IRB approval, 201405051RINC). Eighty-three percent of the subjects were high school graduates; Seventy-three percent of the subjects were single. The average self-rated quality of life score was 74.5. Winsteps and SPSS were used for the subsequent analysis. Results: The results showed that most of the rating scale categories were chosen and were

evenly distributed. The fit statistics and principal components analysis of residuals of each scale met the Rasch measurement model. The most endorsed item was “I had trouble making decisions” for depression scale; “I worried about other people’s reactions to me” for anxiety scale; “When I was mad at someone, I gave them the silent treatment” for anger scale; “I got enough sleep” for sleep disturbance scale; “I still felt sleepy when I woke up” for sleep-related impairment scale. The least endorsed item was “I felt I had no reason for living;” “I had twitching or trembling muscles;” “Just being around people irritated me;” “I felt sad at bedtime;” “I had a hard time controlling my emotions because of poor sleep” for sleep-related impairment scale. The results of the targeting of items at person measures showed that all five scales can identify the subjects’ condition with 96% of precision rate. Conclusions The findings of this study supported the construct validity of depression, anxiety, anger, sleep disturbance and sleep related impairment scales. Further implication of the scales will be mentioned.

No. 64

Delusional Parasitosis: A 25-Year Review in a Single Institute

Poster Presenter: Chu Wei Tsai

SUMMARY:

Background: Delusional parasitosis (DP) is defined as a delusional disorder in which individuals incorrectly believe they are infested with parasites, insects, or bugs, whereas in reality no such infestation is present. Patients with DP usually develop somatic complaints or tactile hallucinations that are compatible to their delusions, including skin itchiness and crawling sensation. Besides, these hallucinations eventually lead to dermatological conditions, such as skin excoriation, chemical burn, or ever more severely, infection that may need surgical intervention. However, because of lack of disease insight, these patients usually visit dermatologists. Hence, psychiatrists have few opportunities to acess their initial manifestations, not to mention their initial treatment response. Methods: A retrospective study design was used using the database from Crux (the NCKUH Department of Dermatology electronic medical and image records database). The study period was 1988 to 2013. As no specific ICD code was referred to DP, and physicians usually underdiagnose this condition, several keywords were used to identify the potentially eligible cases, including “delusion”, “delusional parasitosis”, “parasite”, “dermatitis artefecta”, “monosymptomatic hypochondriacal psychosis”, “bugs”.Chart review was conducted by two psychiatrists to achieve the consensus of diagnosis. In addition, the clinical characteristics and if available, family history was recorded. Results: A total of 61 eligible patients were identified, from which 45 patients were left after exclusion of history of scabies/herpes, other body dysmorphic disorder, and other cutaneous disease, and were therefore more compatible to the diagnosis of DP (women = 24). The mean onset age was 54.1 years, ranging from 25 years to 80 years. Most patients were put on single regiment (n=24), and the most frequently prescribed medication is sulpiride (n=26). The other prescribed antipsychotics were aripiprazole, haloperidol, and risperidone. However, 19 patients with DP were followed up less than one month. In patients with DP followed-up more than one year, the disease severity fluctuated but responded to antipsychotic drugs. Conclusions: To date, no evidence-based treatment exists in managing DP. However, we found that most dermatologists in our hospital prescribed sulpiride with dose ranging from 50 mg/day to 800 mg/day as treatment for DP. The dose of sulpiride were positively correlated with disease improvement. We suggest interdisciplinary and interprofessional collaboration to disentangle the underdiagnosed conditions. Further randomized-controlled trials are also needed to confirm the efficacy of sulpiride for patients with DP.

No. 65

WITHDRAWN

No. 66

Serum Bicaudal C Homolog 1 Levels May Aid to Distinguish Five Different Mental Disorders

Poster Presenter: Yonggui Yuan

SUMMARY:

Background: Misdiagnosis for mental disorders is common partly due to the unknown etiology and there is no objective diagnostic tool for easy operation. Clinical criteria remain the only diagnostic

indicator. Recently, researchers found that Bicaudal C homologue 1 gene (BICC1) was associated with risk factors for major depressive disorders (MDD) and its expression was elevated in MDD patients[1,2]. However, whether serum BICC1 level is significantly different in various mental disorders and may be presented as a potential diagnostic indicator is unknown. Method: Patients who met the Diagnostic and Statistical Manual of Mental Disorders IV (DSM-IV) criteria for paranoid schizophrenia (SZ, n=30), MDD (n=30), bipolar mania (BM, n=30), bipolar depression (BD, n=13) and panic disorder (PD, n=30) along with healthy control subjects (HCs, n=30) were included in the study. Participants in the six study groups were all drug-free for at least two weeks and well-matched in gender, age, body mass index (BMI) and marriage status. We used the scale for Assessment Positive Symptom (SAPS), 17-item Hamilton Depression Rating Scale (HDRS), Young Mania Rating Scale (YMRS), Hamilton Anxiety Rating Scale (HARS) and Panic Disorder Severity Scale (PDSS) to assess the symptom of different patients as applicable. Fasting venous blood samples and clinical data were collected from April 2016 to December 2016. Then serum BICC1 levels were measured by Enzyme-linked immunosorbent assay kits in January 2017. One-way analysis of variance (ANOVA) was used to compare differences of BICC1 levels among the six groups. The area under the ROC curve (AUC) was used to investigate the discriminatory capacity of serum BICC1 (AUC: 0.9-1 = excellent; 0.8-0.9 = good; 0.7-0.8 = fair; 0.6-0.7= poor; 0.5-0.6 = fail)[3]. Results: One-way ANOVA indicated that serum BICC1 levels were significantly higher in all these patient groups compared with HCs, and significantly different between every two disease groups except for BD and PD (all P Tukey < 0.01). The correlation analysis only found that BICC1 negatively correlate with PDSS scores (r = -0.436, P = 0.016), and positively correlate with age (r = 0.441, P = 0.015) and duration of illness (r = 0.364, P = 0.048) in PD patients. ROC analysis showed that serum BICC1 could diagnose all mental disorders accurately with a fair to excellent discriminatory capacity (AUC from 0.714 to 1.000), especially for distinguishing SZ, BD, PD from HCs, MDD from BD as well as BM from BD, the AUC as high as 1.000. Conclusions: The present study clearly showed that serum BICC1 levels were different in different mental disorders. The results suggested that BICC1 may be involved in the pathophysiology of mental disorders and serum BICC1 may be regarded as a promising easy non-traumatic tool for diagnosing various mental disorders.

No. 67

Schizo-Obsessive or Schizo and Obsessive?

Poster Presenter: Zohaib A. Abbasi, M.D.
Co-Author: Christopher Sola

SUMMARY:

Background: The degree of insight patients with Obsessive Compulsive Disorder (OCD) have into their illness varies, with approximately 4% demonstrating "absent insight/delusional beliefs." Delusions can confound the assessment, creating a diagnostic challenge. Methods: A 69-year-old woman presented for a second opinion regarding a history of OCD. She had stopped taking her medications as she did not believe they were working. She initially refused to allow contact with her current psychiatrist for fear that he would fire her from his practice. She was pleasant, neatly groomed, and visibly distressed, wringing her hands and pacing back and forth. She owned and managed real estate property, but asked that we omit her occupation from the record and refused to elaborate as to why. She reported significant financial stress and believed someone was hacking her computer to steal her money. She endorsed using only cash to avoid her credit card from being hacked. Though she could readily afford a smart phone, she worried that these were easier to hack, so she used an old flip phone to further thwart hackers. Repeatedly throughout the encounter she briefly switched her phone on to check it, only to turn it off again as quickly as possible. She described rituals involving checking the stove and locks repetitively, and had installed a home security system due to her conviction that people were coming into her house and displacing the many things she collected (e.g., old magazines) which might one day be valuable. She also described several chronic gastrointestinal symptoms, for which she had visited multiple doctors in a series of unrevealing evaluations. She had been treated as an outpatient for many years, except for one hospitalization 25 years earlier for a psychotic episode, the details of which she could not recall.

She did not believe she had been diagnosed with schizophrenia, and denied any history of hallucinations or thoughts of harming herself or others. She denied history of trauma or abuse, or the use of alcohol or illicit substances. She said she was prescribed sertraline 100 mg daily and was told to stop aripiprazole for unclear reasons. Eventually, she allowed us to communicate with her outpatient psychiatrist, who was very familiar with her longstanding delusional symptoms, which he believed to be the result of her chronic severe OCD, noting that she had never demonstrated any other symptoms consistent with a formal thought disorder. He added that she was presently prescribed sertraline 300 mg daily as well as aripiprazole, and opined that the current symptom exacerbation was due to medication non-compliance. Conclusion: Co-occurring psychotic and obsessive-compulsive symptoms have been

No. 68

Primary Gain but Not the Primary Diagnosis: A Case of Factitious Symptoms Complicating an Acute Presentation of Bipolar 1 Disorder

Poster Presenter: Sara Mozayan
Co-Author: Timothy R. Kreider, M.D., Ph.D.

SUMMARY:

Ms. M, a 46-year-old Caucasian woman with a past psychiatric history of bipolar I disorder and borderline personality disorder, presents for inpatient evaluation of psychosis and catatonia in the context of a depressive episode. In the two months preceding her admission, the patient was increasingly dependent on others for her baseline care and functioning. Her psychosocial history includes a traumatic childhood with an abusive father as well as long-standing, unstable relationships with her family and her boyfriend, a patient with schizophrenia whom she met during a psychiatric hospitalization. The patient's sister detailed the patient's chronic fear of abandonment and manipulative behavior, noting that during her hospitalizations, the family comes together and momentarily ceases conflict to dedicate their attention to the patient. Upon admission, the patient exhibited stereotyped movements, minimal verbal responsiveness, fixed gaze, verbigeration, and negativism. She perseverated on "I'm in hell" and endorsed auditory hallucinations reinforcing that she was in hell. Further observation on the unit raised doubts about whether her symptoms represented true catatonia: her stereotypies seemed exaggerated on repeated examination and were unresponsive to lorazepam treatment, and she was help-seeking on the unit regarding her apparent inability to complete activities of daily living. Factitious disorder and dependent personality disorder were considered as comorbidities of bipolar I disorder. Efforts were focused on maximizing treatment of her depressive symptoms as well as addressing the psychosocial factors that perpetuated her presentation. After several weeks of treatment, she had a dramatic recovery with notable improvement in her mood, functioning, self-care, and factitious symptoms. Despite the refractory course of factitious disorder, this patient experienced a good outcome thanks to aggressive treatment of depression in concert with addressing her coexisting primary gain. In this poster, we discuss challenges of distinguishing factitious from psychotic or catatonic symptoms in the acute psychiatric setting and implications for treatment.

No. 69

Brief Cognitive Therapy for Inpatient Symptomatic Management of Dissociative Identity Disorder

Poster Presenter: Tunisha Zaman
Co-Author: Ayodeji Jolayemi, M.D.

SUMMARY:

Ms G is a 52-year-old African-American woman with a past psychiatric history of Post Traumatic Stress Disorder. She was admitted to the inpatient service after she was found in the community with disorganized behavior, including defecating on herself and making childlike sounds. The initial concern was an acute psychotic episode. Further assessment while on the inpatient unit revealed that her disorganized behavior could stratified into different classes of behaviors in response to different external stimuli. For example, talking about her past traumas, including her childhood sexual abuse, invariably provoked an episode wherein she would regress to about age 7, when the sexual abuse started. She would cry, suck her thumb, and rock on a chair. She had distinct memories of that time, and did not realize she had grown to an adult. At other

discrete, she believed she was a young adult aged 25 years who could defend a younger woman against aggressors. During each discrete time period she expressed different life memories, and was unable to recall her behavior in other time periods. Laboratory tests and imaging studies revealed no significant findings. A provisional diagnosis of Dissociative Identity Disorder was made, and a psychotherapeutic plan was designed for the patient, factoring brevity due to the limitations of acute inpatient care. As her alternate personalities were triggered by stressors and focused around schemas, we chose to use Cognitive Behavioral Therapy. She received a total of 9 sessions of Brief Cognitive Therapy as an inpatient, and was referred for further care as an outpatient. We theorized each alternate personality as having adaptive schemas that are absent in her main personality and which helped her to cope with the emotions stirred by the memories. We then used cognitive restructuring to include these adaptive schemas in her main personality and prevent the frequency of switching. The patient responded to therapy with a significant reduction in switching from regressed child to aggressive adult within the subsequent two weeks. Studies have shown that a significant number of patients with Dissociative Identity Disorder present on inpatient units and are often misdiagnosed. The management approach of these patients on inpatient units remains challenging, especially with the added constraint of managed care. In this poster, we discuss the role of Brief Cognitive Behavioral Therapy in the acute inpatient management of a patient whose disorganized behavior included features of Dissociative Identity Disorder.

No. 70

Empathy Across Difference: Discussing Our Identities as Psychiatry Residents

Poster Presenter: Xinlin Chen, M.D.
Co-Authors: Rita Ouseph, M.D., Nadia Oryema, M.D., Nadejda Bespalova, M.D., Asha D. Martin, M.D., Jose P. Vito, M.D., Carol Ann Bernstein, M.D.

SUMMARY:

Background: When psychiatrists and patients meet in a cross-cultural treatment encounter, each brings aspects of their multicultural identities to the treatment dyad. Research shows that patients' self-esteem and emotional stability are related to their attitudes about their own ethnic background. However there is little research examining clinicians' awareness of our identities as it impacts the therapeutic process. We hypothesize that clinicians' cultural identities impact the therapeutic relationship, therefore greater awareness of our own attitudes regarding our identities would benefit our clinical work. Methods: A literature review shows numerous studies detailing cultural competency curricula; however, these extant trainings mostly focus on the ethnic identity of the patient rather than clinician. The few clinician-centered trainings described in the literature involve social workers and nurses rather than psychiatrists. Our project is a novel peer-led workshop for psychiatry residents to develop sensitivity to our own cultural identities. The workshop is a peer-led discussion for NYU psychiatry residents across all four years of training, modeled after an experiential group process developing clinicians' cultural sensitivity. We modified the workshop to include a multidimensional model of identity and to emphasize structural power imbalances. The workshop lasts 45 minutes, starting with participants agreeing to a group frame that allows for confidentiality and mutual respect. The discussion proceeds through a series of questions inviting personal reflection on identity (including ethnicity, gender and sexuality, religion, class, and ability), early experiences of difference, and power imbalances regarding these identities. The first workshop was held in the fall semester of 2016. Due to positive resident response, we have organized it as an annual workshop and just held our second discussion in 2017. Conclusion: Through exploring residents' cultural identities, this workshop promotes resident wellness insofar as it nurtures a sense of connection to our peers as well as our individual histories. Diversity is increasingly recognized as an asset and the NYU psychiatry residency demonstrates this trend. Beyond the demographic statistics of diversity, how do we best utilize our differing perspectives as psychiatry trainees? This workshop is a starting point towards potentially challenging cross-cultural conversations. Future directions will involve qualitative analysis of themes arising during discussion, which will refine

subsequent workshops and provide direction for residency programs developing similar programs.

No. 71
AOT Through a Racial Equity Lens
Poster Presenter: Samantha Aaron, M.P.H.

SUMMARY:
The New York City Assisted Outpatient Treatment (AOT) Program provides court mandated outpatient treatment to individuals diagnosed with severe mental illness who have a history of non-compliance that has resulted in hospitalization or incarceration. The New York City AOT program was established in 1999 and has coordinated treatment for thousands of consumers. The AOT program undertook an internal racial equity assessment to ensure that the intended outcome of the program was obtained no matter the racial background of the consumer. The AOT program analyzed evaluation data for 3,044 AOT cases that were closed between 2012 and 2016 to conduct an internal systematic review of how people of different racial/ethnic groups were affected by the AOT program. Through this internal racial equity assessment, AOT looked at decisions to renew and compared these decisions to decisions to close the case positively while controlling for substance use, age, petition length, number of arrests, number of hospital admissions, number of ER visits, and referral type (community vs. non community referrals). Community referrals are referrals where the AOT program evaluates if a person meets criteria, conducts a psychiatric exam on the consumer and petitions the court for the order. Analyzing the point of renewal determination will assist AOT in determining if there are any racial differences in the process of the program that we strive to continuously improve. This analysis determined that African Americans were overrepresented in the AOT program both in regards to population representation and prevalence of mental health conditions. Caucasians were less likely to have an AOT order renewed and were more likely to have their AOT case closed for reasons defined by the program as positive. African Americans and Hispanic Americans were less likely to have what the program defines as a positive closure reason and were more likely to have a case renewed than a Caucasian consumer. AOT will conduct further analysis, to determine why there are differences in outcome based on Race. These results may influence the program design of the AOT program. This study was supported by the NYC Assisted Outpatient Treatment Program.

No. 72
Obsessions, Compulsions, and Dietary Fat: Prognostic Implications in Anorexia Nervosa
Poster Presenter: Blair Williams Uniacke, M.D.

SUMMARY:
Identification of the factors that perpetuate illness and contribute to relapse is important in elucidating disease mechanisms in Anorexia Nervosa (AN). The goals of this study were to examine whether obsessionality, a commonly observed psychological feature of AN, is related to avoidance of dietary fat, a core behavioral symptom, and if these two measures are related to prognosis. We hypothesized that 1) obsessionality in AN will be associated with preference for low-fat foods, and 2) obsessionality and low-fat food preference will be associated with greater weight loss after hospital discharge. Methods: Participants were hospitalized females with AN (n=26), ages 16-25 years, and age-matched healthy volunteers (n=21). Participants completed the Obsessive Compulsive Inventory, revised (OCI-R) twice (for AN, upon admission and after weight normalization). AN also completed the Geiselman Food Preference Questionnaire (FPQ). Among AN, weight was assessed over 4 weeks after hospital discharge and weight slope was calculated. Results: Post-treatment OCI-R was negatively correlated with fat preference score on the FPQ (r=-0.57, p=0.007), such that higher obsessionality was associated with greater preference for low-fat foods. Both obsessionality and greater preference for low-fat foods were also associated with higher rates of weight loss post discharge (FPQ: r=0.568, p=0.011; OCI-R: r=-0.51, p=0.014). Conclusions: Obsessionality was related both to dietary fat preference and to weight-loss. These findings contribute to the data indicating that obsessive-compulsive features are an important dimension of AN, and may be important to understanding neural mechanisms and developing treatment targets.

No. 73

Impact on Body Image of CBT Sessions Provided by the Nurse Team in Anorexia Nervosa Patients
Poster Presenter: Cecile Bergot

SUMMARY:
Anorexia Nervosa (AN) is a severe mental illness, requiring multidisciplinary care from a specialized team. Body image disorder is an essential feature of AN ; an adequate treatment of AN should not just take into account eating behaviours and normalize weight, but also should aim to change body image. The CMME Eating Disorders Unit from Sainte-Anne Hospital (Paris, France) is specialized in AN and Bulimia Nervosa treatments, with more than 1000 outpatients and 100 inpatients per year. The nursing team, along with the medical team leader of the Unit (Dr PHAM-SCOTTEZ, MD, PhD), developed a brief (10-sessions, on a weekly basis) Cognitive-Behaviour Therapy focused on body image disturbances in AN patients, assisted with Anamorphic Micro (R) software. During the sessions, the AN patients work on a photograph of their own actual body. Using the software, they can enlarge or shrink the picture. Patients have to set how they think they actually are, and how they wish to be. Using data from this software, the nursing team can then have access to their deep body image disturbances. A study including 100 inpatients was conducted in the Unit. Patients were randomized into two groups, one using this body image CBT, the other group using body image treatment as usual. The results show an improvement on the body image in the two groups between the first and the tenth session, without significant difference between the two kinds of treatments. Nevertheless, they show that the nurses "work" with this population aids significantly in improving their body image. Working with the software allows objectifying a clinically relevant difference between the desired and the perceived image that suggests a new venue of research. Another study is ongoing in our Unit, using this body image CBT with outpatients. This poster explains the principles of our CBT sessions, the results of our study, and will foster fruitful debates with other Eating Disorders teams from different countries.

No. 74
WITHDRAWN

No. 75
Exploring the Role of Ketamine in Maintaining the Antidepressant Response: The Journey Thus Far
Poster Presenter: Lama Bazzi, M.D.
Lead Author: Sanya Virani, M.D., M.P.H.
Co-Authors: Maria Mirabela Bodic, M.D., Theresa Jacob, Ph.D., M.P.H.

SUMMARY:
Background: Most conventional antidepressants treat bipolar and unipolar depression by modifying the monoamine transporter system and have shown a delayed onset of action of a least one week. A large body of research indicates that ketamine is efficacious, safe and well-tolerated at sub-anesthetic doses and has a promising potential as a novel antidepressant. However, the effect of single infusions of ketamine though reliably replicated and effective in relieving depressive symptoms, is transient, with relapse occurring within two weeks. More recent studies have focused on identifying a safe and effective ketamine administration protocol for the rapid and sustained relief of depressive symptoms. Methods: A comprehensive literature search was conducted (for studies through January 2017 that administered intravenous ketamine in multiple infusions) on PubMed, PsycINFO, the Cochrane database and alternate sources like Google Scholar and MEDLINE. Results: A total of ten studies met the criteria and were included in the review. Common themes identified included establishing the safety of intravenous ketamine administration in sub-anesthetic doses in controlled settings with ongoing monitoring, and determining the efficacy of multiple infusions. Infusions conducted in outpatient settings or similar demonstrated clinically practical and applicable dosing strategies which are easy to replicate and cost-effective for administration. Conclusion: In addition to elucidating the mechanism of action of ketamine, we enumerate principle points of studies that administered multiple infusions and followed patients over a longer period. We also identify the pressing need for additional research to fill in the gaps that exist around appropriate dosage regimens and an effective maintenance strategy.

No. 76
Management of Severe Agitation in the Emergency

Department: Establishing Code White

Poster Presenter: Sanya Virani, M.D., M.P.H.
Co-Authors: Anna Bona, Ankit Gohel, Nechama Rothberger, Jason Brady, Maria Mirabela Bodic, M.D., Felix E. Torres, M.D., Reuben Strayer, M.D.

SUMMARY:
Background: Agitated patients commonly present to the Emergency Department (ED), and severely agitated patients pose immediate safety risks to themselves, the staff, and other patients. Management of severe agitation is best accomplished by a protocolized, team-based "alert" type response that incorporates specific systems to deliver a series of patterned actions and immediate availability of calming medications to ensure prompt, best-practice care of this vulnerable patient group. Additionally, management of mild and moderate agitation ideally proceeds according to a strategy individualized to patient-specific factors rather than a "one size fits all" (in our institution, "5 and 2") approach. Methods: Our project is a collaborative effort by the Departments of Emergency Medicine and Psychiatry, which resulted in the development of an algorithm to identify various levels of agitation of all etiologies, not limited to acute psychiatric emergencies, by means of a comprehensive literature review for established best practices and existing guidelines. We also surveyed staff in both departments to determine the principle problems perceived as major obstacles in implementing optimal patient care for severely agitated patients. A total of 38 staff members of various levels and in different roles including attending physicians, residents, registered nurses, security guards, and technicians were approached and asked a 10-question survey, with their responses recorded and transcribed. These identified obstacles were addressed to create a uniform hospital team response protocol for addressing severely agitated patients. Results: Assimilating this data, our team established a "Code White" protocol to establish steps in the management of severely agitated patients in the ED of our tertiary academic hospital center in Brooklyn. We developed a virtual kit in our medication dispenser (Pyxis) that facilitates the immediate availability of appropriate calming medications and organized a multidisciplinary protocoled response to patients with severe agitation. Our agitated patient guideline encompasses this protocoled response to severe agitation as well as best-practice recommendations for managing patients with mild and moderate agitation, tailored to etiology. This patient-centered approach to agitation, can be applied across institutions with a similar ED patient population. Conclusion: Severely agitated patients often present an immediate danger to themselves and others. Skillful management of these agitated patients in the ED is therefore not only crucial for the safety of staff and but also ensures that these agitated patients receive the standard of care so their medical needs may be met. A protocolized, team-based "Code White" response to the management of severe agitation, alongside recommendations for etiology-specific treatment of mild and moderate agitation, may improve staff safety and patient outcomes.

No. 77

Characteristics and Outcomes of Suspected Malingering in the Psychiatric Emergency Department

Poster Presenter: Sean M. Rumschik, M.D.
Co-Author: Jacob M. Appel, M.D., J.D.

SUMMARY:
Background: Malingering is the intentional production or exaggeration of symptoms for the purpose of obtaining secondary gain. Common gains include obtaining shelter or avoiding work or other responsibility. It is not a mental disorder though it is a condition that may be a focus of clinical attention. Malingering is commonly encountered in the psychiatric emergency department, yet little is known about its prevalence, objectives, or effect on patient management. This study analyzed characteristics of malingering and patient disposition in a 24/7 staffed Comprehensive Psychiatric Emergency Program (CPEP) in New York City. **Methods:** Attending psychiatrists completed questionnaires following comprehensive assessment of each patient presenting to the CPEP, recording suspicion for malingering, symptoms malingered, associated secondary gains, demographic characteristics, and initial disposition decision (N=405, response rate 94%). **Results:** Preliminary analyses indicate that 20% of patients were "strongly" or "definitely" suspected of malingering.

There was some degree of suspicion for 33% of patients overall. The most frequently malingered symptoms in the strong-definite malingering group were suicidal ideation (58%), depression (39%), psychosis (30%); 44% of these patients were thought to be malingering more than one symptom. The most common secondary gains in this group were hospital admission (46%), staying in CPEP (30%), obtaining social work or housing resources (11%); 21% had multiple secondary gains. Disposition trend by degree of suspicion for malingering: not suspected (admit 48%, hold 12%, discharge 41%), slightly-moderately suspected (admit 19%, hold 35%, discharge 46%), strongly-definitely suspected (admit 4%, hold 25%, discharge 71%), χ=66.37, df=4, p<0.001. **Conclusion:** Malingering occurs frequently in the emergency setting, often involving malingered suicidal ideation and with the goal of hospital admission, yet few patients thought to be malingering are admitted. This may suggest unmet needs that could be addressed in the community and inform further studies regarding patient management and the doctor-patient relationship in the emergency department.

No. 78

Not the Mama! Categorizing Feigned Pregnancy and Forensic Implications

Poster Presenter: Christopher Paul Marett, M.D., M.P.H.

SUMMARY:

Most clinicians are familiar with pseudocyesis, the appearance of clinical symptoms associated with pregnancy when a person is not actually pregnant. Yet there are other types of "false" pregnancy, and sorting these out can present a clinical challenge. There is a dearth of professional literature on feigned pregnancy, or pretending to be pregnant for a secondary material gain. This poster presents a case that illustrates this concept, and it presents other examples of ways people have feigned pregnancy. It also explores the many reasons why a person may feign pregnancy as well as some forensic implications that necessitate an accurate diagnosis. Finally, it proposes a differential diagnosis of false pregnancy that includes this relatively rare phenomenon. Ms. A was hospitalized under court order for competency restoration treatment on a 28-bed all women's unit of a state inpatient psychiatric hospital. Her psychiatrists diagnosed Ms. A with unspecified bipolar and related disorder, post-traumatic stress disorder, opioid use disorder, and borderline intellectual functioning. Her medication list included oral naltrexone and a low dose of quetiapine. During her first three weeks of hospitalization, Ms. A adjusted well to being hospitalized, though she had occasional conflicts with other patients. Soon after, Ms. A had physical altercations and was assaulted twice. She became more avoidant, and she disclosed vague thoughts about suicide. Her psychiatrist ordered a safety precaution and staff member to watch her at all times. Her mood improved in three days, and she no longer had suicidal thoughts. Subsequently, she was no longer placed on heightened watch. Ms. A then told other patients and her doctors that she was pregnant. Initial and repeat pregnancy tests were negative. When doctors shared this information with Ms. A, she acknowledged that she knew she was not pregnant, though she gave no explanation why she would tell people that. Soon after, Ms. A again told other patients and the staff internist that she was pregnant. Clinical exam and testing results, including FSH, LH, thyroid studies, qualitative and quantitative B-HCG all suggested Ms. A was not pregnant. Further, she had no physical signs or symptoms of pregnancy, and she again acknowledged to her psychiatrist that she was not pregnant. Staff members observed that other patients would hug Ms. A frequently and form a barrier around her during altercations and behavioral emergencies that occurred on the hospital unit. We believe that Ms. A feigned pregnancy to other patients for the secondary gains of security and deferential treatment while hospitalized. Making the diagnosis of malingered pregnancy potentially spared Ms. A from unneeded additional exposure to antipsychotic medication, and it allowed for a more accurate forensic opinion regarding Ms. A's competency to stand trial.

No. 79

Co-Ed Versus Single-Gender Forensic Units: Which Are Most Violent?

Poster Presenter: Kayla L. Fisher, M.D., J.D.

SUMMARY:

Violence reduction on forensic units continues to be of interest in providing safety to patients and clinicians, yet little data exists regarding aggression rate comparisons on single-gender vs. co-ed units. This poster provides data collected over 24 months from a 1525-bed forensic facility within a corrections-secured perimeter. Data were examined to determine trends of aggression on co-ed vs. single gender units with the variables of patient to patient aggression and patient to staff aggression. Additional variables examined included gender differences in aggressive incident rates on single gender vs co-ed units. This set of data found that, overall, single-gender forensic units had lower aggression rates when compared with co-ed units, with single-gender units having 88 aggressive incidents per 100 patient beds per year and co-ed units having 108 aggressive incidents per 100 patient beds per year. The decreased aggression rate on co-ed units was observed on both patient to patient and patient to staff interactions. Data on gender differences in aggressive incident rates on co-ed vs. single gender units showed a marked increase in aggression in women on co-ed units vs. single-gender units (101 aggressive incidents per 100 patient beds per year on single gender units and 155 aggressive incidents per 100 patient beds on co-ed units), while the effects of unit type on men was inconclusive. These findings highlight areas for possible institutional interventions, including changes to housing policies for forensic inpatients.

No. 80

Expanding *Tarasoff*: The Implications of Volk v. Demeerleer

Poster Presenter: Kayla L. Fisher, M.D., J.D.

SUMMARY:

Psychiatrists have long recognized their legal duty to protect an identified victim from a patient's serious threat of harm, as required by the ruling in Tarasoff v. Regents of the University of California in 1976. As a result of Tarasoff, psychiatrists have a duty "to use reasonable care to protect the intended victim." The duty is not absolute, but requires that reasonable preventive measures be taken. Now, the Washington State Supreme Court has expanded the Tarasoff duty for clinicians of that state through their ruling in Volk v. DeMeerLeer. In their ruling, the Court held that the clinician has a duty to "foreseeable victims"--even if never identified by the patient. This ruling has troublesome implications, including: 1) increasing liability; 2) eroding patient expectations of confidentiality; 3) decreasing motivation to integrate mental health and general healthcare; 4) increasing involuntary commitment referrals; 5) fewer clinicians wiling to work with patients at risk for violence and 6) placing unreasonable burdens on clinicians. After a review of the Tarasoff requirements along with the general facts and ruling in Volk v. DeMeerLeer, this poster will explore these implications and their potential impacts on forensic psychiatry.

No. 81

Factors Influencing Competence to Stand Trial: Present and Future Challenges

Poster Presenter: Cristina M. Secarea, M.D.

SUMMARY:

Few studies on adjudicative competence explore the relationship between diagnosis, treatment and restorability. Most focus on demographics and major psychiatric diagnosis and very few will explore variables specific to the forensic population, like personality disorders, substance abuse and medication non-adherence. In the context of long periods of time in the hospital and high costs, a greater empirical base is needed to inform the judicial and mental health systems on the factors that most influence restorability. Our study of 365 Incompetent to Stand Trial (IST) defendants at a state psychiatric facility confirmed the importance of substance use and personality disorders increasing the odds of restoration, in contrast with cognitive disorders, misdemeanor charges and history of prior hospitalizations decreasing the odds of restorability. Exploration of medication adherence in this population indicated that non-adherence is associated with restorability. The picture of medication adherence may be entirely different, among those with personality disorders and substance use, with minimal to no pharmacological treatment needed during their hospitalization for competence restoration, proving once again that the role of medication remains elusive among non-psychotic individuals.

No. 82

The Efficacy of Riverside County Detention's Behavioral Health Medical Remedial Plan on Recidivism Rates Among Adult Male Inmates

Poster Presenter: Troy L. Kurz, M.D.

SUMMARY:

Introduction: It is well known that many inmates who suffer from mental illnesses require treatment with psychotropic medication(s) and that outpatient behavioral health resources must be provided to inmates following their release from custody in order to improve outcomes and decrease recidivism rates.1-3 In 2016, Riverside County Detention Behavioral Health established a medical remedial plan to help address the elevated recidivism rates among mentally ill inmates and to improve overall psychiatric outcomes.4 The goals of this plan included things like treatment for mental illness with proper medications upon booking and establishment of outpatient psychiatric care upon release from jail. Our research team sought to study the efficacy of this program on recidivism rates of male inmates that suffer from mental illness who were treated with specific oral antipsychotics and who received outpatient psychiatric care upon release from jail. Our hypothesis was that inmates suffering from mental illness who received psychiatric services upon release from jail would have lower recidivism rates than would inmates who did not establish care. Methods: The sample was obtained from Riverside County Detention Behavioral Health's medical records. We identified 298 male inmates between the ages of 18 and 35 who were incarcerated between 10/1/16-4/30/17 and released between 10/8/16 and 10/31/17 and started on oral stand-alone medication of Ziprasidone, Risperidone or Olanzapine during incarceration. This sample consisted of 2 groups: 1. 269 males who had received no community psychiatric services following their release and 2. 29 males who had received community psychiatric services following their first release. Results: A binary logistic regression was conducted utilizing psychiatric service as the predictor, re-incarceration as the outcome, and age as a control variable. Age was entered into the equation first, followed by psychiatric service. The full logistic regression model was significant, ?2(2) = 6.13, p < .05. Age did not significantly predict re-incarceration, odds ratio = 1.01, Wald = 0.17 (p = .68), whereas psychiatric service did, odds ratio = 2.81, Wald = 5.24 (p = .02). More specifically, male inmates who received a follow-up psychiatric service demonstrated lower rates of recidivism than did those who did not receive a service. Conclusion: Male inmates adequately treated with oral antipsychotics who also received psychiatric services were less likely to be re-incarcerated than were those who had not received psychiatric services following their initial release from incarceration. Overall, age does not seem to predict re-incarceration in our age-restricted sample. For future studies, we recommend obtaining a larger sample size of individuals receiving post-release psychiatric treatment to compare against those not receiving treatment (n = 29 vs. n = 269), as this prevents valid conclusions from being drawn in the present study, and to

No. 83

Effectiveness of ECT in a Forensic Psychiatric Setting: A Case Study

Poster Presenter: Susan Ezzell, B.S.

Co-Authors: Evan Holloway, M.A., Brian Belfi, Psy.D., Debbie Green, Ph.D.

SUMMARY:

Background: Aggression among forensic psychiatric patients is relatively common, as an average of 44.4% to 60% of patients commit acts of aggression over one to three year follow-up periods. Almost half of patients who commit aggression perpetrate single acts of aggression and it is a small proportion of patients who are responsible for most incidents. Little is known about effective treatment for this particular subgroup of chronically aggressive patients. Finding effective treatment for these individuals can be difficult, but one promising modality involves electroconvulsive therapy (ECT). Only one study has examined the use of ECT in a forensic sample. In that study, seven of eight patients showed an excellent or good response in terms of reduction in symptoms of psychosis and incidents of aggression against self and others; positive symptoms of schizophrenia were especially responsive to ECT. The goal of the current study is to expand the literature on the use of ECT in a forensic

setting. Method: We conducted a retrospective study of one male patient who was admitted to a maximum-security forensic hospital in New York after being found incompetent to stand trial. He was referred for ECT due to treatment resistant psychotic symptoms and aggression. The patient is a Caucasian male in his early 40s diagnosed with Schizoaffective disorder. His current charges include assault, criminal obstruction of breathing or blood circulation, and strangulation. Medical records were examined and data was collected on aspects of each individual ECT session and the frequency of one-to-one constant observation, restraints, seclusions, and emergency (STAT) or as-needed (PRN) medications. Information on aggressive incidents was also collected and coded for violence using the START Outcome Scale. Results: The patient received 116 sessions of ECT over an 18-month period prior to starting maintenance ECT (biweekly ECT), 97 (83.6%) of which were bifrontal ECT. During the three months prior to starting ECT, the patient had 77 incidents of aggressive behavior, most commonly physical aggression against others (21 incidents) and self-harm (22 incidents). During the three month follow-up after beginning maintenance ECT, he had no incidents of aggression and during the one year follow-up he had 6 total incidents of aggression, most commonly self-harm (4 incidents). A repeated measures ANOVA indicated a significant difference between the mean frequency of aggression between the three months prior to the start of ECT and all other times ($p<.05$). There were no significant mean differences between any other time points. Conclusion: ECT reduced the frequency of aggression in this case. This effect appears to be stable over time and occurred quickly after the start of ECT. These results indicate promise for ECT as a viable option for reducing the frequency of aggression among forensic psychiatric patients.

No. 84

Improving the Quality of Care and Well-Being of Transgender Patients: Creating an Innovative, Multidisciplinary Clinic

Poster Presenter: Sarah Clare Cook, M.D.
Co-Authors: Sonya Haw, Jason Schneider, Silke von Esenwein, Ph.D.

SUMMARY:

Background: Transgender people experience discrimination in healthcare, including access to internists, psychiatrists and other subspecialists. Health disparities among the transgender community are well documented (Reisner 2014). Transgender patients experience higher prevalence of anxiety, depression, HIV, and substance abuse. Transgender people are more likely to report suicide attempts or ideation, childhood abuse and intimate partner violence (Avery 2004). Successful medical care for transgender patients involves a multidisciplinary approach. This innovative project addresses the need for improved transgender care through a dedicated transgender clinic, provided by consultants in one location with staff who are sensitive to the health needs of transgender patients. Methods: An interdisciplinary working group was formed involving multiple specialties. Training was provided to staff, trainees, and faculty to improve knowledge, attitudes and competency of healthcare providers in delivering transgender care, and pre- and post-curriculum surveys evaluated the effectiveness of the educational intervention. Nine focus groups were conducted over a six-month period. Patients see a primary care physician or endocrinologist, with consults as needed from psychiatry and obstetrics-gynecology. Patients referred to psychiatry undergo a standard evaluation and may participate in a voluntary study to collect diagnostic data. Patients referred to psychiatry also have the option to see a licensed professional counselor. Results: Focus groups with transgender individuals and advocates revealed that many avoid care due to prior traumatizing experiences in the healthcare setting and lack of access. Residents wanted to improve care for transgender patients but felt unknowledgeable regarding history-taking, physical examination, and best practices for transgender individuals. The voluntary psychiatric evaluations, will likely reveal increased psychiatric comorbidity compared to the general population. Discussion: A collaborative care model improves access to care for transgender patients by coordinating subspecialty consultation, facilitating access and increased quality. Preliminary challenges include many no-show visits. Use of psychiatry and gynecology services appears to be underutilized. With continued engagement with community advocates and building therapeutic alliances with

patients, as well as improving the quality of care clinicians deliver, patient attendance and well-being may improve. The clinic will increase hours each month providing more flexibility for patients and providers improving quality of care. Conclusion: A transgender clinic addresses the need for improved transgender care through access to subspecialty care and education of providers. This innovative clinic provides comprehensive care to an underserved community, improving well-being and greater understanding of a highly stigmatized patient population.

No. 85

Equine Therapy Improves Quality of Life and Well-Being in Children With Anxiety Disorders

Poster Presenter: Diego Coira, M.D.
Lead Author: Rafael Coira, M.D., J.D.
Co-Authors: Jennifer Coira, Dana Spett, M.S.W., Margaret Grady, M.S.N.

SUMMARY:
Anxiety disorders are common and sometimes debilitating in children and adolescents. Although psychotherapy and medications may be effective, there is a significant number of patients that don't respond or only partially respond to treatment. Equine assisted therapy is an effective adjunctive treatment for children with anxiety disorders. We retrospectively reviewed 40 cases of children treated with equine therapy as an adjunct to standard of care for the treatment of anxiety disorders. Patients were evaluated by a child psychiatrist before starting the eight week program, monthly during the program and at the completion of the 8 week sessions. Parents were also interviewed by the child psychiatrist before starting the program, monthly and at the end of the program. All patients showed improvement in their anxiety levels and their quality of life. Both patients and their parents expressed satisfaction with the program. Our study demonstrates that equine therapy could be an effective adjunct treatment for children with anxiety disorders. More studies are needed to validate our findings.

No. 86

Vitamins and Minerals as Adjunctive Therapy to Psychotropic Medication in Severely and Persistently Mentally Ill Patients

Poster Presenter: Barbara D. Bartlik, M.D.
Co-Authors: Devina Dhirag Bhamray, Sabeen Arif, Tania Sultana, Vittoria Turano

SUMMARY:
Several lines of evidence suggest an association between psychiatric disorders and deficiencies in such nutrients as magnesium (Mg), zinc, vitamins D, B, C, E, and more. Behavioral symptoms of schizophrenia are thought to be related to a deficit in NMDA and GABA-ergic neuronal signaling. Mg is a naturally occurring NMDA antagonist and acts upon GABA neurons as well. The association of vitamin D deficiency and psychiatric disorders has been widely reported. Vitamins such as folic acid, B12, and B6 are cofactors in the synthesis of neurotransmitters. We propose that the supplementation of Mg, Vitamin D, B complex, multivitamins, and other nutrients can increase the therapeutic benefit while enabling severely ill psychiatric patients to remain stable at lower doses of psychotropic medications. Our analysis seeks to elucidate the efficacy of adjunctive combinations of vitamins and minerals in lowering antipsychotic drug doses without compromising the clinical stability of patients. 66 patients were prescribed a combination of one or more nutritional supplements including Mg, vitamin D, multivitamins, and B complex at the Manhattan Psychiatric Center Out-Patient Clinic. Of these, 20 were deemed compliant with both supplements and antipsychotic medications as reported by the patient or their informant. The patients were diagnosed with schizophrenia or schizoaffective disorder per DSM-5 criteria. After two to six weeks on supplements, the dose of antipsychotic medication was down titrated. All 20 patients continued to be clinically stable. 36.4% (N=8) were on a clozapine regimen and 54.5% (N=12) were on either a first or second generation antipsychotic regimen. The risperidone dose equivalence was calculated for all patients. The mean pre-and post-supplement risperidone dose equivalents were 8.33 (SD=5.02) and 5.23 (SD=3.25). Those for clozapine were 325.00 (SD: 84.5) and 209.38 (SD: 113.34). In conclusion, varying combinations of Mg, vitamin D, B complex, and multivitamins enhanced the ability to reduce the dose of psychiatric medication without compromising stability. The possibility of medication

dose reduction has the potential to minimize such side effects as EPS, metabolic syndrome, neutropenia, infection, and cardiotoxicity. It must be reinforced that the objective of this study was not to prove that medication dosages can be lowered with nutritional supplements, but simply, to raise awareness about the use of nutritional supplements as adjunctive therapy for patients with serious psychiatric illness. Currently, nutrient therapies are more commonly used by patients with less severe psychopathology, such as pain, anxiety, and depression. However, patients with major mental illness can benefit as well, and the supplements are often covered by insurance. A major limitation of the study was small sample size and lack of control group; however, this may inform the design of future trials of nutritional supplements in severely mentally ill patients.

No. 87

Managing Depression Among Homeless Adults in an Urban Setting: Pilot Testing an Adapted Collaborative Care Intervention Model

Poster Presenter: Carissa Caban-Aleman, M.D.

SUMMARY:

This poster presents will summarize a case series study to be published before the meeting, describing three cases from a sample of more than one hundred adults that completed an integrated care management program voluntarily consisting of a depression screening protocol within primary care. The overall goal is to illustrate how the collaborative care model was adapted and implemented for an urban homeless population receiving primary and mental health care in a Federally Qualified Health Center (FQHC) in Miami, Florida. This study identifies and proposes effective methods to address the unique aspects of care for homeless adults screening positive for depression during a primary care visit in an FQHC. The study was thought of after establishing and implementing the program under a grant, for screening and quality improvement purposes. This will be a case study of three subjects to describe how the collaborative care model was adapted for this population's needs. The researchers reviewed previously collected information from patients' records and the integrated care manager's patient registry.

No. 88

The Clozapine Clinic: A New Opportunity for Integrated Care Approach

Poster Presenter: Tagbo E. Arene, M.D., M.P.H.

SUMMARY:

Introduction: This study aims to demonstrate the feasibility of using large administrative databases to characterize antipsychotic polypharmacy patterns among the Severely Mental Ill (SMI) in a county outpatient clinic and explore application of Integrated Care models as a possible solution to the underutilization of Clozapine pharmacotherapy in treatment resistant psychotic illness. A significant proportion of individuals with psychotic illness are either refractory to, or intolerant of, standard antipsychotic pharmacotherapy. There is currently only one medication available with proven effectiveness in this population. Clozapine while providing a superior response rate requires significant physical health care monitoring both before and during treatment. Methods: A site was selected for establishment of a new Clozapine Clinic to provide services for individuals with treatment refractory psychotic symptoms or individuals with medication side effects deemed to be related to standard antipsychotic medications. Individuals were selected without predetermined exclusion criteria such as age or physical comorbidity. Patients were accepted into the Clozapine Clinic with a combination of physical health and mental health assessments. The Clozapine Clinic was fortunately located in close proximity to a County Primary Care Clinic and County Tertiary Care Hospital, both of which were helpful in obtaining baseline physical health assessments and diagnostic tests and concurrent hematologic and metabolic laboratory monitoring. Results: A new Clozapine Medication Support service line was established using a collaborative care model with existing County facilities. In less than a year, the Clozapine Clinic services at this clinical site were expanded to approximately 13 individuals, with additional individuals awaiting entry. There are weekly, biweekly and monthly psychiatric and physical health monitoring. Conclusions: Clozapine pharmacotherapy for treatment refractory psychiatric illness is vastly underutilized in large part

due to the complexity in coordination of physical health and mental health needs. Using a collaborative relationship and employing integrated care principles as the model, the complex care of new and established Clozapine patients was provided at an existing County Mental Health Clinic. Considering the SMI patients' have more scheduled visits with the psychiatrist in this setting, this Clozapine clinic could represent patients' primary medical home. This will enhance the provision of quality care that is patient centered, accessible and cost effective. Furthermore, this study may provide an opportunity to explore a Complex illness Integrated Care Practices with the psychiatrist as a Principal Care Provider and its role in optimal care to this population's physical and mental

No. 89

Integrating Primary Care and Behavioral Health in a Pediatric Population: Assessment of Needs at a Pediatric Community Mental Health Center

Poster Presenter: Taylor Johnson
Co-Authors: Crystal Gaynelle Thomas, M.D., Nichole Ammon

SUMMARY:
Background: Exploring the topic of integrated care in the pediatric setting is imperative because there is strong evidence that integrating primary care and behavioral health care improves outcomes; however, most of the research and the current models of integrated care focus on the adult population. When incorporating a primary care physician (PCP) into a pediatric community mental health center (CMHC), various challenges may be faced such as low utilization, scheduling barriers, and billing issues as were seen at one pediatric CMHC. This quality improvement project aimed to evaluate the primary care needs of this select patient population. Methods: A survey was developed to assess the percentage of children and their parents/guardians who were currently under the care of a PCP and to evaluate the various barriers they have encountered regarding their physical health care. The anonymous surveys were given to the parents of patients at a pediatric CMHC. Surveys assessed the ages of the children and their parents, whether the children and their parents currently have a PCP, if the children and their parents have seen their PCP in the past year, possible barriers preventing the children and their parents from seeing a PCP (if any), and any medical conditions that the children and their parents have. Data were analyzed using means, standard deviations, and chi-squared tests. Results: A total of 172 surveys were completed with a total of 187 patient data. The average age of the child was 11.08 and that of the parent was 40. The percentage of children who have a PCP is 95.7% and the percentage of children who have seen a PCP in the past year is 89.8%. The percentage of parents who have a PCP is 85.2% with 80.6% having reported being seen by their PCP in the past year. A statistical difference was found in children with medical conditions and children without medical conditions with respect to those who see a PCP (88% vs 96% respectively, $p=0.047$). A statistical difference was also found between children whose parents see a PCP (98.7%) and children whose parents do not see a PCP (85.2%) with respect to children seeing a PCP themselves ($p<0.001$). Various barriers to children seeing PCPs include lack of transportation, new custody arrangements, parents not satisfied with their current care, lack of access, parents unsure where to make appointments, changing providers, and no known medical conditions. Conclusion: In conclusion, most children at a pediatric CMHC have a PCP and have seen their PCP in the past year. This data corroborates findings from the National Health Interview Survey in which 93.0% of children were reported to have had contact with a health care professional in the past year (cdc.gov, 2015). Based on these findings, providers may want to consider assessing the primary care needs of their patients and developing a targeted approach to reach those without PCPs to most effectively utilize the integrated care clinic.

No. 90

Psychiatric Considerations Regarding Prehospital Administration of Ketamine for Agitation

Poster Presenter: Lewis Tian
Co-Author: William J. Newman, M.D.

SUMMARY:
Recently, ketamine has seen increased use among emergency medical services (EMS) in the prehospital setting as a first-line means of chemical restraint for

agitated patients. Mr. K, a 24-year-old man with no known psychiatric history, was involved in a domestic dispute during which he was witnessed waving a knife and voicing threats toward his girlfriend. The police responded to the scene and ultimately took him down when he refused to follow their instructions. The EMS crew who arrived at the scene ultimately administered intramuscular ketamine to address his agitation in the field. After receiving the ketamine, Mr. K began complaining of hearing voices and seeming paranoid and fearful. He was taken to the ED, evaluated by the psychiatry consult service, and deemed to require admission to the inpatient psychiatric unit. He was treated using an atypical antipsychotic to help facilitate improvement of his psychotic symptoms. By the day after admission, when the inpatient psychiatry team evaluated him, he no longer reported or displayed evidence that he was experiencing ongoing psychotic symptoms. This case generated concern that prehospital ketamine administration for non-psychotic agitation may have caused unexpected psychotic symptoms necessitating admission. As ketamine gains widespread use as prehospital sedation for agitated patients, the safety profile in this environment and patient population deserves reevaluation. In this poster, we review relevant literature and discuss important factors to consider regarding the use of prehospital ketamine for agitation, including psychiatric and substance abuse history.

No. 91

Patterns of Care Following Emergency Department Visits for Suicide Attempt by Active Duty Servicemembers and Their Dependents

Poster Presenter: Zachary Peters
Co-Authors: Jennifer Greenberg, Jennifer Tucker, Melissa Waitsman, Ruth Quah, Fuad Issa

SUMMARY:
BACKGROUND: In December 2015, the Department of Defense (DoD) Strategy for Suicide Prevention (DSSP) became the DoD's "foundation and strategic point of reference for suicide prevention efforts". Within the DSSP's 13 overarching goals and 60 actionable objectives are several objectives regarding suicide-related care in Emergency Departments (EDs). Objective 8.8 aims to provide alternatives to ED care for patients at risk of suicide and to simultaneously ensure timely follow-up for these patients within the Military Health System's (MHS) outpatient mental health (MH) settings. We are taking the first step toward fulfilling Objective 8.8: establish baseline patterns of care in Military Treatment Facilities (MTFs) following suicide-related ED visits among Active Duty Service Members (ADSMs) and their dependents. By describing trends in ED visits and subsequent patterns of follow-up care, this analysis informs the Defense Health Agency's (DHA) work to continually improve suicide-related care and prevention in accordance with the DSSP. METHODS: Using the MHS Data Repository (MDR), which includes all administrative medical records for TRICARE beneficiaries, this study will assess MH care utilization following an ED visit associated with a suicide attempt diagnosis among ADSMs and their dependents from 2010 to 2015. ED visits will be identified in both MTFs (direct care) and civilian networks (purchased care); preliminary analyses identified an annual average of 7,800 ED visits coded with a suicide attempt from 2010 to 2015. For these cases, we will examine variables such as sex, age, rank, years of service, suicide attempt method, and diagnoses recorded at the ED visit. For the twelve month period following each ED visit, we will examine time to first subsequent MH care appointment; total number and type of MH appointments; missed or cancelled MH appointments; recorded diagnoses; and time to psychiatric hospitalization for any diagnosis. Additionally, to assess differences between groups, we will compare time to first MH follow-up visit after an ED visit for a suicide attempt among ADSMs and dependents. Given that direct care MH appointments are prioritized for ADSMs, we expect that time to first MH follow-up visit will be shorter among ADSMs than among dependents. We will also examine whether the environment in which an individual presents (direct vs. purchased care) for a suicide attempt affects time to first MH follow-up. CONCLUSION: Findings from the current study will highlight patterns of aftercare utilization for ADSMs and their dependents at risk for suicide in the MHS and will provide a set of advanced metrics that DHA can use to inform future policies and practices as well as monitor and evaluate any changes implemented in the pursuit of improved care.

No. 92

Beyond Vital: Psychiatric Technicians in the Operational Military Environment as Applied Integrated Care

Poster Presenter: Miguel Magsaysay Alampay, M.D.
Co-Author: Daniel R. May, D.O.

SUMMARY:

This poster provides an overview of how psychiatric technicians are trained in the various branches of the military, how this training is being developed upon in operational military environments, and the ways that this model can be applied to civilian settings. Mental health has long-been recognized as a significant component of military readiness. Military psychiatrists have utilized an array of modalities drawn from areas of positive psychiatry, group therapy, psychosomatic medicine, psychodrama, forensics, and addiction psychiatry. In the course of this work, psychiatric technicians have come to play crucial roles in triage and management of patients. This is especially true in the operational military environment where resources and access to other mental health providers is limited. More than taking vital signs or providing assistance in direct line-of-sight watches, psychiatric technicians have been used to facilitate therapy groups, conduct intake assessments, provide individual counseling, and teach psycho-education courses to service members and other healthcare providers. The degree to which the roles of psychiatric technicians have evolved often reflects the unique needs of their environment – Army, Navy, Marine Corps, Air Force - to maximize readiness throughout the active duty military workforce. The presenters highlight how these differences have shaped the innovative ways in which psychiatric technicians are being utilized; and elucidate common themes that have contributed the successful extension of care. Ethical pitfalls, the need for supervision, and importance of ongoing continuing education are also discussed.

No. 93

Expeditionary Psychiatry: Initial Data From the Forward Deployed Naval Forces

Poster Presenter: Miguel Magsaysay Alampay, M.D.
Co-Author: Alana Connell

SUMMARY:

The Expeditionary Psychiatry Program was created in July 2016 as a means of embedding a psychiatrist in the Forward Deployed Naval Forces based in Sasebo, Japan. The intent of this program is to enhance the readiness of the 6,000 sailors and marines currently serving in that region. As an embedded asset belonging to the operational forces, the Strike Group Psychiatrist and Psychiatric technician lived alongside and went underway with the catchment population. This has allowed for a unique perspective into the stressors inherent to the surface fleet community, the interpersonal and social dynamics that impact the lives of service members, and means of intervening in ways not previous possible. It has also provided mental health providers direct access to warfare commanders in a way that provides real time and actionable feedback on issues affecting the morale and well-being of the crew. Additionally, the Program works directly with primary care providers aboard the ships to build the local capacity to manage mental health issues at the primary care level. As such, the Program serves effectively as an employee assistance program, means of delivering care directly to sailors in the middle of the ocean, and provider of continuing education to non-mental health providers. This poster aims to provide and overview of the programs structure, present data on the success of the program based on quality metrics, and display feedback from stakeholders such as general medical officers and commanding officers validating the program's utility. The goal in presenting this information is to encourage further innovation in how further increasing access to mental healthcare and receptiveness to the input of mental health providers can both help individual employees and management in other settings.

No. 94

WITHDRAWN

No. 95

Early-Onset Psychosis in the Military: Improving Outcomes and Transition of Care

Poster Presenter: Jason Alan Anthes, D.O.
Co-Authors: Rita Rein, M.D., Philip M. Yam, M.D.

SUMMARY:

Schizophrenia is rare in the military. However, military members do occasionally present with psychotic symptoms. The challenge of providing patient-centered care, protecting confidentiality, and assessing fitness for duty is a substantial task. Military members are worldwide; thus evaluations must be thorough and consider a differential diagnosis of chemical exposure, rare viruses, parasites, and autoimmune reactions. Designer drug abuse, dissociative disorders, personality disorders, conversion disorder, and malingering must also be explored. Additionally, an emphasis must be placed on safety as a military member in a psychotic state potentiates risk of self-harm or public endangerment. However, best results occur when there is established mutual trust, patient agreement, and voluntary treatment. A presentation of psychosis can greatly impact a service member's career. These members predominantly transition from active duty to retirees and veterans, and this process necessitates an established rapport with the provider, medication adherence, and a focus on building strengths and independent function. In an engaging poster session, the presenter will discuss cases of early-onset psychosis in the military, identify challenges, and present best approaches for this unique population.

No. 96

Creutzfeldt-Jakob Disease: The Importance of Comprehensive Workup of Personality Change

Poster Presenter: Taner Aydin
Co-Author: Timothy R. Kreider, M.D., Ph.D.

SUMMARY:

CC, an 80-year-old Caucasian woman with no past psychiatric history and a past medical history of hypertension, presented to the psychiatric consult service with acute agitation in a background of six months of worsening personality change. The patient was brought by family to her neurologist for concerns about a progressive deterioration over the past six months in cognition and independence with personality change, culminating in 2 weeks of increasing irritability and agitation. She was admitted to the hospital for work-up of rapidly progressive dementia. Psychiatry was consulted to evaluate for major depressive disorder; history indicated that, in addition to the irritability, she no longer enjoyed her usual activities, she lost twenty pounds due to decreased appetite, and she had poor sleep and poor concentration. On exam, she had a Mini Mental Status Exam (MMSE) score of 19/30, oppositional paratonia (gegenhalten), and no focal neurologic deficits. An MRI of the brain showed extensive areas of increased signal throughout the supratentorial cortex (cortical ribboning sign) in addition to high-intensity signal abnormalities in the caudate nucleus, consistent with Creutzfeldt-Jakob disease (CJD). CJD can present initially with psychiatric symptoms in 20-26% of patients and these symptoms occur in 80-90% of patients throughout the course of the illness. However, psychiatric changes are not included in the CDC criteria for possible or probable CJD; rather the criteria indicate that rapidly progressive dementia must be accompanied by two of the following: myoclonus, visual or cerebellar signs, pyramidal/extrapyramidal signs, or akinetic mutism. In this poster, we discuss a patient with likely Creutzfeldt-Jakob disease presenting with cognitive decline and otherwise only psychiatric symptoms, highlighting the diagnostic challenge of a non-specific presentation of a rare disease. Personality change in a geriatric patient with no history of prior psychiatric illness or recent psychosocial stressor warrants a thorough medical and neurological workup, even in the absence of localizing signs on exam.

No. 97

WITHDRAWN

No. 98

Self-Reported Driving Behaviors and Attitudes of Older Adults Diagnosed With Mild Cognitive Impairment and Major Depressive Disorder

Poster Presenter: Mark J. Rapoport, M.D.
Co-Authors: Carla Zucchero Sarracini, Holly Tuokko, Ph.D., Nathan Herrmann, M.D., Damien Gallagher, M.D., Benoit Henri Mulsant, M.D., Tarek K. Rajji, M.D., Linda Mah, M.D., Corinne Fischer, M.D., Alastair Flint, M.D., Bruce Godfrey Pollock, M.D., Ph.D., Anita Myers, Ph.D., Jenessa Johnston

SUMMARY:

Background: Both mild cognitive impairment (MCI) and major depressive disorder (MDD), are significant

risk factors for dementia. These conditions may adversely impact cognitive functions necessary to drive safely. Self-awareness of cognitive decline and associated self-regulation of driving behavior can minimize potential risks associated with driving. In older adults with diagnosed psychiatric disorders, balancing potential risks of driving against self-regulatory behaviors, is challenging due to the paucity of research on driving patterns in these older individuals. This study seeks to examine the impact of mild cognitive impairment (MCI) and a history of major depressive disorder (MDD) in remission on self-reported driving behaviors and attitudes among older adults to explore factors that may lead to self-regulation. **Methods:** The Situational Driving Frequency Scale, Situational Driving Avoidance scale, Driving Comfort (day and night) Scales, and the Decisional Balance Plus scale were administered in three groups of participants enrolled in PACt-MD, a study of transcranial direct current stimulation combined with cognitive remediation to prevent Alzheimer's dementia: older adults with either MCI, MDD in remission or both. The responses for the seven scales were analyzed through a multivariate analysis of variance, followed by one-way analyses of variance to follow-up on statistically significant interactions. **Results:** The scales were completed by 78 participants with MCI (53% male, mean age 73.39, SD 7.6 years), 50 with MDD in remission (28% male, mean age 72.48, SD 4.5 years), and 29 with both MCI and MDD in remission (52% male, mean age 71.59, SD 5.6 years). There were no statistical differences among the three groups in self-reported driving frequency, driving avoidance, driving comfort at day or night, perceived driving abilities, or positive beliefs about the impact of driving for themselves. Women reported less negative views than men on the impact of driving for themselves in all three cohorts (Cohen's d=4.18, p=0.002). Overall, those diagnosed with MCI reported less positive views of the impact of driving for others than those with remitted MDD (d=0.38, p=0.013). **Discussion:** Older persons with MCI, MDD in remission, or both report similar driving behavior, comfort, and perceived abilities. However, there were gender disparities in the perceived negative impacts of driving for themselves, and differences between MCI and MDD in remission in the perceived positive impact of driving for others. These findings have implications for future planning of self-regulation and cessation of driving for patients at risk for dementia. Limitations include reliance on self-report, and lack of adjustment for comorbidities and medication. Further research is necessary to determine the key factors associated with self-regulation of driving among those diagnosed with both MCI and a history of MDD. Funding provided by Brain Canada for PACt-MD study group.

No. 99

A Systematic Review of the Risk of Motor Vehicle Collision After Stroke or Transient Ischemic Attack

Poster Presenter: Mark J. Rapoport, M.D.
Co-Authors: Sarah Plonka, Hillel Finestone, Justin Chee, Desmond O'Neill

SUMMARY:

Background: Stroke can impair the motor and cognitive skills required to drive safely. The potential risks associated with these impairments must be balanced against the importance of driving for independence, mental health, social inclusion and well-being. Finding the appropriate balance is challenging in the absence of empirical evidence regarding risk of motor vehicle collisions (MVC) associated with stroke. The purpose of the present study was to determine whether stroke and/or transient ischemic attack (TIA) are associated with an increased MVC risk. Method: We searched MEDLINE, CINAHL, EMBASE, PsychINFO and TRID through December 2016. Pairs of reviewers came to consensus on inclusion, based on an iterative review of abstracts and full text manuscripts, on data extraction, and on the quality of evidence. Results: From the 5,605 citations identified, 12 articles met our inclusion criteria. Only one of three case-control studies showed an increased risk of stroke in persons with at-fault MVC (OR 1.9, 95% CI 1.0-3.9). Of five cohort reports, only one study, limited to self-report, found an increased risk of MVC associated with stroke or TIA (RR 2.71, 95% CI 1.11-6.61). Two of four studies using computerized driving simulators identified more than a two-fold risk of MVCs among participants with stroke, compared with controls, and in one of these the difference was restricted to those with middle cerebral artery stroke. Discussion: The decline in driving skills following stroke identified in prior reviews does not appear to

translate into a robust increase in risk of MVCs. However, there is a paucity of high quality studies of the impact of stroke on driving. Several biases and limitation increase variability among studies, including small sample sizes in simulator studies, a lack of ascertainment of at-fault status and limited controlling of confounders in most observational studies, and likely exclusion of those with severe impairment. Further research is needed to better quantify the MVC risk after stroke and to identify robust clinical predictors of risk. Until then individualized assessment and clinical judgement must continue to be used in assessing and advising patients about their MVC risk after stroke, because of wide variability in stroke outcomes. This research was supported by the Ministry of Transportation of Ontario Road Safety Research Partnership Program and the Canadian Medical Association/Joule Inc.

No. 100

Positive Cognitive Effects of Bilingualism and Multilingualism on Cerebral Function: A Review

Poster Presenter: Cibel Quinteros Baumgart
Co-Author: Stephen Bates Billick, M.D.

SUMMARY:

A review of the current literature regarding bilingualism demonstrates that bilingualism is linked to higher levels of controlled attention and inhibition in executive control and can protect against the decline of executive control in aging by contributing to cognitive reserve. Bilinguals may also have smaller vocabulary size and slower lexical retrieval for each language. The joint activation theory is proposed to explain these results. Older trilingual adults experience more protection against cognitive decline and trilingual children and young adults showed similar cognitive advantages to bilinguals in inhibitory control. Second language learners do not yet show cognitive changes associated with multilingualism. The Specificity Principle states that the acquisition of multiple languages is moderated by multiple factors and varies between experiences. Bilingualism and multilingualism are both associated with immigration but different types of multilingualism can develop depending on the situation. Cultural cues and language similarity also play a role in language switching and multiple language acquisition. The current literature suggests that it is important to understand both cognitive and cultural effects of bilingualism. The largely positive effects of bilingualism on cognitive function call for not just the support of bilingual families, but bilingual education for children from monolingual households.

No. 101

Pilot Study: Caregiver-Patient Dyad Stress in Huntington's Disease: No Brainer, Patient Socialization and Physical Disability Matter

Poster Presenter: Cheryl Ann Kennedy, M.D.
Co-Authors: Chiadikaobi Okeorji, Ghulam Sajjad Khan, M.B.B.S.

SUMMARY:

Background: Huntington's Disease (HD) is a neurodegenerative autosomal dominant neuropsychiatric disorder that is debilitating, disabling and uniformly fatal. It can place enormous physical and psychological stress on those affected along with their caregivers. Patients generally psychiatric symptoms prior to the onset of the relentless movement disorder and, later, dementia. Many are cared for by spouses at home until it is no longer feasible. In this pilot study, we evaluated some factors associated with the Perceived Stress Scale in the home caregivers of a sample of HD patients. Method: With IRB approval, we administered surveys to consenting caregivers and patients with HD who receive services from our Statewide program to support patients and families in NJ. Descriptive statistics were developed; bivariate multivariate regression examined the association between Perceived Stress Scale of caregivers and independent variables: Friendship scale of patient being cared for, SF36 score of patient, PTSD score of caregiver, Quality of Life of caregiver. SPSS was used to analyze data. Results: A total of 8 caregiver & patient dyads with HD were included (total n=16). Caregivers: 63% female; 63% married; 63% caring for spouse or partner; 88% were main caregivers; 43% were unemployed; 50% had postgraduate degrees. Mean Perceived Stress Score=31.0±2.7; Mean overall SF36 score (caregiver)=33.5±9.7; Mean PTSD score (caregiver)=26.4±8.4; Mean PHQ (caregiver)=4.4±4.6; Mean QOL score(caregiver)=64.1±10.7. Patients: 57% female; 57% married; 100% unemployed; 85% college

educated. Mean overall SF36 (patient)=67.5±27.7; Mean friendship scale (patient)== 24.0±5.7; Mean PHQ 6.5±4.4. Higher friendship scale score in patients is associated with a lower perceived stress score in caregiver (p=0.000011); lower SF36 score in the patient is associated with a higher perceived stress score in caregiver (p=0.037). Discussion: It is well understood that those who provide care of the medically ill are subject to tremendous stress and often burn-out. Caregivers for HD patients and patients with HD both face physical and psychological challenges. These challenges are magnified in these families who are at risk for, had or have, multiple other family members with the condition. Previous studies have evaluated factors that affect their quality of life. Our pilot study suggests that better socialization of HD patients has a direct positive effect on the caregiver. Lower SF36 score in patients (especially physical health) indicates more disability and negatively impacts caregivers' stress levels. Caregivers should be targeted for additional supportive services while patients with HD need more opportunities to socialize. More research is needed to discover innovative methods to mitigate stress in the caregiver corps since the formal medical care system cannot replace them.

No. 102

Huntington's Disease: Close Social Support Influences Progression to Long-Term Placement

Poster Presenter: Cheryl Ann Kennedy, M.D.
Co-Authors: Chiadikaobi Okeorji, Mansi Shah

SUMMARY:

Background: Huntington's disease (HD) is a uniformly fatal neurodegenerative autosomal disorder genetic caused by a CAG repeat expansion in the huntingtin gene on 4p that leads to a mutant form of huntingtin. This aberrant protein causes progressive degradation of brain cells and a complex neuropsychiatric condition with an involuntary movement disorder that can occur in any muscle. Often the first symptoms are Psychiatric and may involve bizarre or dangerous behaviors years prior to the onset of active motor symptoms and the progressive dementia of HD. Most patients take psychiatric medications to treat associated mood, anxiety and psychotic disorders. The debilitating and disabling nature of HD generally necessitates placement in a nursing facility for long term care (LTC) as the disease advances. In this retrospective review of medical records from our Inter-professionally staffed HD specialty center, we evaluated the factors that may influence the time of diagnosis to placement (TDP) in LTC. Methods: We reviewed 37 records of HD patients prior to LTC placement and collected socio-demographic variables, treatment history, stage of HD and CAG repeat size. Descriptive analysis for the variables were done. Bivariate analyses assessed associations between TDP and other variables. Multivariate regression determined statistical associations. Results: Of the 37 records reviewed 59% were female (n=22); 86% were Caucasian (n=32); most were single and lived alone (59% n=22); less than a third were married or lived with partners (n=10); 43% had a substance use disorder (n=16). The mean age of first symptom onset was 45.1 years (±10.1); Mean HD staging scale overall score= 30.4 (±13.2, range=6-69, higher is worse functioning); The mean Time from Diagnosis to Placement (TDP) was 5.1 years (±4.6). Chi square analyses showed that being married is significantly associated with longer period for TDP (p=0.05). Living with a partner and being younger when first symptoms present appear to slow down the odds of progression of impacts of disease severity needing LTC. Substance use seems to increase the odds of lessening Time from Diagnosis to Placement. Multivariate regression analysis showed a statistically significant association between overall HD rating scale score and TDP (p=0.0029). Discussion: Certainly, severity of disease is a significant influence on placement decisions. Our analysis suggests that social support (being married or living with a partner) may prolong TDP. The progressive dysfunction and disabilities associated with HD may be buffered by in home assistance and delay LTC placement, while substance use may compound dysfunction and lessen ability to be maintained in a community setting. More research is needed to study the effects of other specific social support and impacts of substance use in those who have HD.

No. 103

Psychiatric Patient Satisfaction: What Have We Learned From Psychiatric Inpatients in an Urban

Academic Medical Center?

Poster Presenter: Cheryl Ann Kennedy, M.D.
Co-Authors: Chiadikaobi Okeorji, Vandana Doda, Najeeb U. Hussain, M.D.

SUMMARY:

Background: Patient satisfaction is an indicator of healthcare quality and is used in mental health performance monitoring systems. Patient adherence to survey requests post-discharge is not strong. Psychiatric inpatients maybe least likely to respond and given that hospitalized mentally ill patients are the most vulnerable, psychiatric inpatient units must be safe and patient centered. In this study, we evaluated the hospital conditions and treatment team behaviors that could be impacted to improve the level of satisfaction of our inpatients. Our survey is only slightly modified and based on the Mass General Hospital Survey of 17 questions regarding aspects of the patient experience on a Psychiatric Inpatient unit and a question that asks the responder to rate overall satisfaction on a scale of 1-10. Participants were patients are on a locked unit with voluntary and involuntary patients in a general tertiary care teaching hospital located in a dense urban environment. Methods: A patient satisfaction survey was administered to voluntarily consenting psychiatric inpatients on the day of discharge. Patients being transferred to another facility were not eligible. Socio-demographic and treatment history were obtained from the medical record with the patients' informed consent. Results: Study included 849 participants: 70% African Americans; 23% were 18-25 years old; 57% were male; 53% were voluntarily admitted; 84% were domiciled prior to admission. Mean age of participants=37.84±13.63; Mean length of stay (LOS)= 11.37±7.46 days; Mean level of satisfaction=8/10. Patients were overwhelmingly satisfied with inpatient care. Bivariate and multivariate regression analysis level of satisfaction & domains of patient satisfaction (socio-demographic, information, medication, understanding with staff, post hospital care & staff as a team). Younger patients (<38 yrs) reported a higher level of satisfaction compared to older patients (p=0.0016). Domiciled patients reported a higher level of satisfaction than homeless patients (p=0.00021). Patients who reported better understanding and communication with staff had a higher level of satisfaction (p<0.00001); support on how to prevent relapses was associated with higher satisfaction (p=0.012); Post hospital care information was associated with higher level of satisfaction (p=0.025). Conclusion: This study of over 800 participants, an approximate year's worth of discharges, demonstrates that social support, information, understanding, and post hospital care recommendations influence the level of satisfaction experienced by patients while in a psychiatric inpatient unit. Communication with patients and provision of useful information are modifiable factors that can positively impact patient satisfaction. A better understanding, through a more detailed analysis of the data, of why patients without a fixed home and older adults are less satisfied than other groups.

No. 104

The Impact of a Single Nucleotide Polymorphism in SIGMAR1 on Depressive Symptoms in Major Depressive Disorder and Bipolar Disorder

Poster Presenter: Taeyoun Jun, M.D.
Co-Author: Hyungsook Hong

SUMMARY:

Background: Ample evidence suggested a role of sigma-1 receptor in affective disorders since the interaction of numerous antidepressants with sigma receptors was discovered. A recent study on Japanese subjects found a genetic variant within the encoding gene SIGMAR1 (rs1800866A[C) associated with major depressive disorder (MDD). We aimed to evaluate the same polymorphism in both MDD and bipolar disorder (BD) as well as its relationship to response to treatment with antidepressants and mood stabilizers. Methods: A total of 238 MDD patients treated for an acute episode of depression, 132 BD patients in treatment with mood stabilizers for a manic or mixed episode, and 324 controls were genotyped for rs1800866. At discharge, response to treatments was evaluated in MDD and BD patients by the Hamilton Rating Scale for Depression and the Young Mania Rating Score, respectively. Results: In our Korean sample, allele frequencies were different from those reported in other Asian and non-Asian populations. The CC genotype was associated with BD and, as a trend, with MDD. No significant effect

was observed on response to antidepressants in MDD or mood stabilizers in BD, although the CC genotype was more frequent among BD patients experiencing a mixed episode. Conclusion: The present findings are the first to propose the putative role of genetic variants within SIGMAR1 and sigma-1 receptor in BD. Sigma-1 receptor can modulate a number of central neurotransmitter systems as well as some other signaling pathways which are seemingly involved in BD and other mood disorders. Acknowledgment This research was supported by a grant of the Korea Health Technology R&D Project through the Korea Health Industry Development Institute, funded by the Ministry of Health & Welfare, Republic of Korea (Grant Number: HC15C1405).

No. 105

Genome-Wide Association Study of Antidepressant Response: Involvement of the Inorganic Cation Trans-Membrane Transporter Activity Pathway

Poster Presenter: Taeyoun Jun, M.D.
Co-Author: Sangeun Yang

SUMMARY:

Background: Genome-wide association studies (GWAS) represent the current frontier in pharmacogenomics. Thousands of subjects of Caucasian ancestry have been included in previous GWAS investigating antidepressant response. GWAS focused on this phenotype are lacking in Asian populations. Methods: A sample of 109 major depressive disorder (MDD) patients of Korean origin in antidepressant treatment was collected. Phenotypes were response and remission according to the Hamilton Rating Scale for Depression (HRSD). Genome-wide genotyping was performed using the Illumina Human Omni2.5-8 platform. The same phenotypes were used in the STAR*D level 1 (n = 1677) for independent replication. In order to corroborate findings and increase the comparability between the two datasets, three levels of analysis (SNPs, genes and pathways) were carried out. Bonferroni correction, permutations, and replication across samples were used to reduce the risk of false positives. Results: Among the genes replicated across the two samples (permutated $p < 0.05$ in both of them), CTNNA3 appeared promising. The inorganic cation transmembrane transporter activity pathway (GO:0022890) was associated with antidepressant response in both samples ($p = 2.9e-5$ and $p = 0.001$ in the Korean and STAR*D samples, respectively) and this pathway included CACNA1A, CACNA1C, and CACNB2 genes. Conclusions: The present study supported the involvement of genes coding for subunits of L-type voltage-gated calcium channel in antidepressant efficacy across different ethnicities but replication of findings is required before any definitive statement. Keywords: Pharmacogenomics, GWAS, Major depression, Antidepressant, Gene, Pathway, Calcium channel, Cation transmembrane transporter

No. 106

A Novel Association of Polymorphism in the ITGA4 Gene With Increased Risk of Alzheimer's Disease

Poster Presenter: Maria Kralova
Lead Author: Vladimira Durmanova, Ph.D.
Co-Authors: Zuzana Parnicka, Ph.D., Juraj Javor, Ph.D., Barbora Vaseckova, Ph.D., Jan Pecenak, Ph.D., Ivana Shawkatova

SUMMARY:

Background: Alzheimer's disease (AD) is a chronic neurodegenerative disease affecting people over 65 years of age. The disease is characterized by progressive memory loss, confusion and cognitive impairment. Pathogenesis of AD has not been sufficiently explained yet. One of the possible mechanisms contributing to AD pathogenesis is neuroinflammation. The molecule alpha4beta1, also known as Very Late Antigen 4 (VLA-4), belongs to adhesion molecules that activate the inflammatory process through migration of T cells into the CNS. The alpha 4 chain (CD49d) is encoded by the polymorphic ITGA4 gene. The objective of our study was to analyze the association between two polymorphisms located in the ITGA4 gene and the risk of AD. Methods: The investigated group included 84 late-onset AD patients and 136 age-matched control subjects of Caucasian origin. Two single nucleotide polymorphisms (SNPs) in the ITGA4 gene were investigated: the SNP at position +3061 (rs1143676) causing an arginine (CGG) to glutamine (CAG) transversion at amino acid position 878, and a C to A transversion at position -269 (rs113276800) in the promoter region of the gene. The SNPs were determined by PCR-SSP and PCR-RFLP methods.

APOE-epsilon4 as a known AD associated genetic factor was genotyped by direct sequencing. Statistical significance of differences in allele, genotype and haplotype frequencies between AD patients and controls was evaluated by the standard chi-square test. Multivariate logistic-regression analysis adjusted for gender, age and APOE-epsilon4 positivity as possible influencing factors was also performed. Results: Significantly higher frequency of ITGA4 +3061AG genotype (rs1143676) in both the co-dominant genetic model (AG vs GG, P = 0.0017, OR = 2.73) and dominant genetic model (AG+GG vs AA, P = 0.0024, OR = 2.35) was observed in AD patients as compared to healthy controls. This higher prevalence in AD patients remained significant also after the adjustment for sex, age and APOE-epsilon4 positivity (P = 0.0094, OR = 3.18). Following the APOE-epsilon4 stratification of study groups, the association remained significant only in APOE-epsilon4 non-carriers. Genotyping in APOE-epsilon4-negative group showed significantly higher prevalence of +3061AG genotype in AD patients as compared to the controls in both the codominant genetic model (AG vs GG, P = 0.0061, OR = 3.02) and dominant genetic model (AG + GG vs AA, P = 0.0053, OR = 2.57). Conclusion: This is the first study reporting a possible role of ITGA4 gene coding for alpha4 chain of VLA-4 integrin in the genetic susceptibility to AD. We have identified a novel independent genetic association between the ITGA4 +3061A/G variant and increased risk of AD. Our data provide additional evidence to the knowledge that, besides the known genetic factors like APOE-epsilon4, other genetic variants may be involved in the induction of late-onset AD pathology. This study was supported by Grant agency VEGA (No. 1/0240/16).

No. 107
White Matter Changes in OCD: Differences Between Checkers and Washers
Poster Presenter: Pedro Morgado

SUMMARY:
Background: Obsessive-Compulsive disorder (OCD) is an heterogeneous psychiatric disorder characterized by stressful thoughts and ritualistic behaviors, with several symptom dimensions. It's modulated by a neural circuit (CSTC), which connects frontal cortices with the basal ganglia and thalamus, although insufficient. This study analyzes white mater changes, exploring differences between checkers and washers. Methods: 90 participants (45 healthy and 45 OCD patients) with no medical comorbidities underwent a Diffusion Tensor imaging (DTI) protocol in order to extract fractional anisotropy (FA) images, which were submitted to a TBSS analysis protocol to detect white matter tracts differences between groups. Then, the OCD group was subdivided into two subgroups (Washers and Checkers) regarding the symptoms nature. Then, t-tests and pearsons correlations were performed between groups, to search the impact of cortisol, perceived stress, symptoms severity and medication time. Results: OCD showed less integrity than healthy subjects in the Corona Radiata, Internal Capsule, External Capsule, Corpus Callosum, Superior Longitudinal Fasciculus, Saggital Stratum, Stria Terminalis and Cerebral Peduncle. The majority of these areas were also compromised between OCD subgroups, in which less integrity was verified in Washers, although not statistically. Within Washers and Checkers, perceived stress showed positive correlations with obsessions and compulsions, respectively. FA values showed negative correlations with all clinical parameters in Washers, whilst Checkers had positives instead. Medication time showed negative correlations with FA values and cortisol, in Washers and Checkers, respectively. Conclusion: This study supports the hypothesis of a wider pathophysiology, compared to CSTC model. Apparently, washers have less integrity on their neural tracts and even suffer from a more susceptibility to stress levels. Additionally, the same stressful situation in Washers apparently creates an emotional response, based on obsessions, whilst Checkers become more impulsive and performs a compulsion.

No. 108
Management of OCD Cases With Various Comorbities: A Case Series
Poster Presenter: Sachidanand R. Peteru, M.D.
Co-Author: Manu Dhawan

SUMMARY:
Obsessive-compulsive disorder (OCD) is characterized by recurrent intrusive, ego dystonic,

thoughts, images, urges and or repetitive compulsive physical or mental acts in response to the severe distress associated with obsessions or rules that must be applied rigidly[1]. Approximately 50 percent of all cases have their onset in childhood and adolescence. [2-3]Adults in the United States have an estimated 12-month prevalence of 1.2% and an estimated lifetime prevalence of 2.3%[4-5]. 21% of OCD cases have onset by age ten years. [6-7]. Some people have an episodic course, and a minority have a deteriorating course. OCD often has co-occurring disorders such as anxiety disorders, mood disorder, OCPD, Tourettes, ADHD, MDD, bipolar disorder, and schizophrenia, eating disorders, body dysmorphic disorder, trichotillomania, and excoriation disorder causing diagnosis and treatment difficulties. We present here our case series with various co morbidities and our experience in successfully treating them. Without treatment, remission rates in adults are low and disabling. There is a flourishing literature of control trials of various augmentation strategies for OCD nonresponders. In our case series, we achieved remission with augmentation strategies which are described under in each case. Other OCD related disorders as included in DSM 5 are body dysmorphic disorder, trichotillomania, excoriation (skin picking) disorder and hoarding disorder. A 2015 review and meta-analysis suggest that there is a strong link between suicidal thoughts and behaviors and OCD [8] and the importance of treatment cannot be overemphasized. Research studies indicate that genetic and environmental factors contribute to the etiology of obsessive-compulsive disorder (OCD). Several research studies implicate the cortico-striato-thalamo-cortical (CSTC) circuits in the pathophysiology of the disorder; other brain circuits are believed to contribute as well [9]. The standard scale for measuring OCD severity is the Yale- Brown Obsessive-Compulsive Scale (YBOCS). In our case series, we used a self-reported version of YBOCS as well as OCD checklist to measure remission and response. For our case series, we applied most commonly used criteria of 25% reduction of YBOCS as response and YBOCS score of less than 12 as remission.

No. 109

A Systematic Review and Meta-Analysis of the Symptoms of Obsessive-Compulsive Disorder During Pregnancy and Postpartum Period

Poster Presenter: Vladan Starcevic, M.D.

SUMMARY:

Objective: This systematic review and meta-analysis aimed to ascertain whether there are significant differences in the frequency of various obsessions and compulsions between women with obsessive-compulsive disorder (OCD) who are pregnant, postpartum and those who are neither pregnant nor postpartum. Methods: A review was undertaken of all published studies that examined types of obsessions and compulsions in OCD women who were pregnant, postpartum and neither pregnant nor postpartum. The extracted data were subjected to a meta-analysis. Results: During pregnancy, types of obsessions were reported in 112 OCD women and types of compulsions in 110 OCD women. In the postpartum period, types of obsessions were reported in 241 OCD women and types of compulsions in 186 OCD women. Obsessions and compulsions were reported in 203 OCD women who were neither pregnant nor postpartum. The most frequent obsessions during pregnancy were contamination concerns (71.4%) and a need for symmetry or exactness (33.0%), while the most frequent compulsions during pregnancy were cleaning/washing (70.9%) and checking (56.4%). The most frequent obsessions postpartum were aggressive thoughts involving the infant (54.4%), contamination concerns (48.1%) and thoughts about accidental/unintentional harm to the infant (34.9%). The most frequent compulsions postpartum were checking (54.3%), cleaning/washing (47.0%) and seeking reassurance from others (25.9%). The most frequent obsessions in women who were neither pregnant nor postpartum were contamination concerns (69.0%) and a need for symmetry or exactness (41.4%), while the most frequent compulsions in these women were cleaning/washing (70.0%) and checking (59.6%). Meta-analytic analyses revealed that there were no significant differences in the frequency of various obsessions and compulsions between OCD women who were pregnant and those who were neither pregnant nor postpartum. In terms of the frequency of obsessions, the only significant differences in the meta-analysis were between pregnant and postpartum women for aggressive obsessions involving the infant ($p<0.0001$)

and for obsessions about accidental/unintentional harm to the infant (p=0.009) and between postpartum women and those who were neither pregnant nor postpartum for aggressive obsessions involving the infant (p<0.0001). With regards to the frequency of compulsions, the only significant differences in the meta-analysis were between pregnant and postpartum women for cleaning/washing (p=0.0006) and for seeking reassurance from others (p<0.0001) and between postpartum women and those who were neither pregnant nor postpartum for cleaning/washing (p<0.0001). Conclusions: These results confirm that aggressive obsessions and particularly obsessions about deliberate or accidental harm to the infant are a common and characteristic feature of postpartum OCD, with significant implications for etiology, understanding and management of postpartum O

No. 110

Excoriation Disorder: Are We Being Too "Picky?"

Poster Presenter: Sheena Ann Dohar, M.D.
Co-Author: Romika Dhar

SUMMARY:

Background: Excoriation (skin picking) disorder is categorized as a behavioral addiction under the obsessive compulsive and related disorders in DSM 5. Studies show prevalence between 1.5-5.4% in the community with female predominance. At present, literature search of opioid antagonists in behavioral addiction provides only one narrative review suggesting that gambling disorder is the only such addiction in the obsessive compulsive category for which there have been adequate trials providing evidence for the use of naltrexone for reduction of behaviors. Methods: We report a valuable case of a 29 year old female with a history of skin picking disorder since the age of 12 yrs who responded to a naltrexone trial of 50mg daily. This patient meets diagnostic criteria for DSM 5 diagnosis of excoriation disorder given her persistent picking of skin behind her neck, arms, and legs, which resulted in visible excoriations and frequent infections. The patient reported that her picking was reinforced by a sense of satisfaction and relief provided by her engagement in picking at her skin. The patient's skin picking was completely eliminated by naltrexone intervention at a 1 month interval follow up. The usefulness of naltrexone as an intervention is further evidenced by the patient's report that her picking behavior returned when she discontinued naltrexone due to nausea, a side effect that she could not tolerate. Discussion: Though categorized under the OCD spectrum disorders, neurocognitive data demonstrate a distinction between individuals with skin picking disorder and individuals with OCD. The disorder shares some characteristics with substance use disorder (SUD) with the suspected involvement of the reward pathway, specifically medication alteration of the mesolimbic circuits via modulation of serotonin, glutamine, dopamine and the opioidergic antagonism provided by naltrexone. Efficacy of other drugs like SSRIs, lamotrigine, and N-acetyl cysteine is limited by small sample sizes and single case reports. Conclusion: Skin picking disorder can lead to significant morbidity and medical complications like infections, wounds and disfiguration as in our presented patient. There is often a long treatment lag due to the embarrassment and stigma associated with the behavior. Our successful treatment of skin picking with naltrexone helps to support that the act of self-excoriation is reinforcing given that it is likely conditioned through similar neuro-circuitry as that in SUD, the category of addiction in which naltrexone has been much better studied since the FDA approval of naltrexone for the treatment of alcohol dependence in 1994. Large clinical trials are needed to elucidate its phenomenology, clinical heterogeneity and pharmacological treatment with the goal being to establish criteria to identify patients whose picking behaviors have a hedonistic quality akin to (SUD) because these individuals may benefit from opioid antagonists.

No. 111

Longitudinal Study: The Interplay of Borderline Personality Disorder and Depression in Suicidal Adolescents

Poster Presenter: Tania Sasson
Co-Author: Brian J. Greenfield, M.D.

SUMMARY:

Introduction: Youth presenting to the emergency room in suicidal crisis suffer from a variety of axis I and axis II disorders. It has been observed that 40% meet criteria for depression. While 85% meet

criteria for borderline personality disorder at the time of assessment, another 60% will suffer with this disorder. Depression and borderline personality disorder have both been idependently associated with suicidality. Methods: This is a secondary analysis of data reported on previously concerning 286 adolescents consecutively admitted to a metropolitan paediatric emergency room. This study was undertaken to examine the difference between suicidal youth who were and were not depressed, and more specifically the impact of BPD on depression. At recruitment, these patients were administered a three hour battery of measures concerning axis I and axis II disorders and psychosocial variables. This battery of tests was repeated at two-month, six-month and four-year follow-up. Group differences over time were examined among those who were depressed vs not depressed and whether BPD differentiated between those groups and affected outcome. Results: The four sub-groups of suicidal adolescents based on the presence or absence of BPD or depresssion pathology are distinguishable by the following variables; drug use (p=0.017), age (p=0.047), family distress (IFR, p=0.014), stressful life events (Coddington, p=0.002), the three BPD subscales (affect, p<0.001; cognition, p<0.001; impulsivity, p<0.001), functioning (CGAS, p<0.001), conduct disorder (p=0.009), depression (p=0.002) and suicide (p=0.001). Depression (p=0.0027; CI: -14.910, -3.178) significantly diminishes functioning at outcome, while there is a trend for BPD (p=0.3850; CI: -5.098, 1.966) to do so as well. The combined presence of the two disorders does not contribute to further impaired functionality. There is a trend for both depression (p=0.0712; CI: -0.021, 0.507) and BPD (p=0.1414; CI: -0.037, 0.255) alone and their combined presence (p=0.1411; CI: -0.072, 0.503) to contribute to increased suicidality at outcome. Conclusion: Co-morbid BPD and depression at four-year follow-up increased suicidality compared to each disorder in isolation, while functioning was not decreased to a greater extent. This suggests that intervention in suicidal youth presenting for crisis assessment should include management of both these conditions to treat suicidality.

No. 112

Examining the Relationship Between Childhood Trauma, Social Cognition, and Social Functioning

Poster Presenter: Sharely Fred
Co-Authors: Sarah Rutter, M.A., John Samuels, Caridad Benavides, M.D., Emmett Larsen, Rosarito Clari, Daliah Ross, Margaret McClure, M.D., Ph.D., Daniel Rosell, M.D., Ph.D., Harold Warren Koenigsberg, M.D., Erin Hazlett, Ph.D., Antonia New, M.D., Maria Mercedes Perez-Rodriguez, M.D., Ph.D.

SUMMARY:
Background: Childhood trauma has been linked to psychological morbidity in adulthood. A key contributor to morbidity in psychiatric disorders is social cognitive impairment, particularly deficits in mentalizing, or the ability to interpret social cues. Errors in mentalizing are known to hinder social functioning and we hypothesize this could be reflected in the ability to form close relationships. In this study, we explore 1) the relationship between childhood trauma and mentalizing and 2) the relationship between childhood trauma and the ability to form close relationships. Methods: Data was collected from patients with borderline personality disorder (n=20), schizotypal personality disorder (n=37), and healthy controls (n=36) who completed the Childhood Trauma Questionnaire-Short Form (CTQ-SF), a 28-item self-report scale that assesses the severity of emotional and physical neglect, physical, emotional, and sexual abuse. The CTQ-SF cut-off scores for exposure were used to calculate the prevalence of trauma. Social cognition testing was completed with the Movie for the Assessment of Social Cognition (MASC). The ability to form close relationships was assessed with the Experiences in Close Relationships Inventory (ECRI), a measure of relational attachment anxiety and avoidance, and social functioning was assessed with the International Support Evaluation List (ISEL-12), a measure of perceived real world social support. We assessed the relationship between trauma exposure and mentalizing measures, and the relationship between CTQ-SF scores and ECRI and ISEL-12 scores using Pearson correlations. Results: Compared to HC, childhood trauma scores in all domains were higher in BPD and SPD patients, and negatively correlated with self-reported real-world social support on the ISEL. Higher childhood physical neglect was correlated with lower mentalizing accuracy on the MASC (r=-0.27;p=0.049). Higher emotional abuse

and neglect scores were significantly correlated with greater attachment avoidance (r=0.46;p<0.001,r=.41;p=0.001) and anxiety scores (r=0.36;p=0.004, r=0.43;p=0.001). Higher physical abuse and neglect scores were significantly correlated with higher attachment avoidance (r=0.39;p=0.002; r=0.30;p=0.019) and anxiety (r=0.25,p=0.05;r=0.38,p=0.003). Conclusion: Greater childhood trauma is associated with lower perceived social support, and in particular, physical neglect is associated with impaired social cognition. Emotional abuse and neglect, and physical abuse and neglect, are all associated with higher relational avoidance and anxiety. Significance: By better understanding the relationship between childhood trauma and social cognition and functioning, this study highlights the importance of considering past traumatic experiences in the treatment of patients with psychiatric disorders.

No. 113

Prevalence and Impact of Personality Disorders on Drug Dependent Homeless Individuals: A Literature Review

Poster Presenter: Zachary Lane

SUMMARY:

Background: It is well known that psychiatric disorders are prevalent in homeless individuals. Psychotic illness, alcohol use disorder and substance use disorder are noted to be widespread in these populations. The prevalence and impact of personality disorders, however, is less well studied in these populations. Strong associations have been posited between personality disorder and substance use, mood, anxiety, and psychotic disorders. Effective management of these dual-diagnosed individuals may therefore benefit from a better understanding of what impact personality disorders have on these factors. Methods: A literature review was conducted using the PubMed database using the keywords “Homeless”, and “Personality Disorders”. Results: The overwhelming majority of homeless populations studied in these articles were found to suffer from at least one personality disorder with rates ranging from 82-93% across different studies. Cluster A diagnoses were the most common, found in 73-88% of sample. Cluster A disorders were identified in the homeless at rates higher than other drug dependent samples. Cluster B prevalence was 74-83%, but at rates comparable to other drug dependent samples. Cluster C disorders were identified in 80-85% of samples, and also disproportionately overrepresented compared to non-homeless substance abuse treatment samples. Prevalence of specific diagnoses varied but paranoid personality disorder was the most commonly identified across studies and antisocial personality disorder was found at a lower prevalence than initially suspected. Personality disorder diagnosis was associated with increasing rates of psychopathology and social morbidity, including poor engagement, retention, a nd utili zation of housing, vocational, mental health, and addiction services. Personality disorders are also strongly associated with drop out from treatment programs, especially Cluster B diagnosis. Paradoxically, studies have shown that Cluster C patients presented with lower rates of treatment abandonment, particularly dependent personality disorder. Conclusions: There is little published psychiatric research addressing the prevalence of personality disorders in homeless populations and even fewer that utilize structured studies. The published literature that does exist illustrates an overwhelmingly high prevalence of personality disorder diagnoses in these populations. Studies also demonstrate a strong association between personality disorders and co-morbid substance abuse, mood, anxiety, and psychotic illness, social problems, poorer treatment outcomes, and higher treatment abandonment. Based on these findings, it seems this topic merits further investigation. In particular further research should be done on diagnostic assessment tools and therapies that address the unique needs of dual-diagnosed homeless persons.

No. 114

Resident Development of Modules for Teaching Ethics in Psychiatry With a Sample Case: Coercion and Psychiatric Hospitalization

Poster Presenter: Melanie K. Miller, M.D.

SUMMARY:

This year at the University of Virginia, several 4th year psychiatry residents started a new rotation in medical ethics. A component of this rotation was to develop a new curriculum for medical students and

residents focused on common ethical issues in psychiatry.

No. 115

The Role of Exercise in the Treatment of Depression

Poster Presenter: Ruma Mian

SUMMARY:

Depression is among the most common psychiatric illnesses, affecting 121 million adults world-wide and close to 9.5% Americans every year (1,2). Not only is depression a life threatening mental illness, it is also the leading cause of disability in the United States. The management of depression is known to be global challenge, with only a 50% adherence rate to conventional pharmaceutical therapies (1). This statistic speaks to how a vast majority of the depressed population is left untreated, experiencing symptoms, unable to participate as a functioning member of society. In present, evidence-based medicine and several randomized controlled trials have tested the relationship between exercise interventions and alleviation of symptoms of clinical depression with mixed results associated with exercise involvement (2). A recent Cochrance review investigated the effectiveness of exercise compared with antidepressants and cognitive behavioral therapy in treating depression and concluded there to be no significant difference between the three interventions (3). A Duke study also tested the same relationship in 156 subjects with major depressive disorder and showed a significant decrease in rates of depression in the exercise group in comparison with both the antidepressant and the combined therapy groups 10 months after conclusion of the study (3). Additional research also suggests the benefits of exercise involvement may be long lasting (2). Adults with depression that enrolled in fitness programs experienced a significant reduction in depression and anxiety after 12 weeks of training (2). Researchers have highlighted physiological processes by which exercise leads to influence mood. Some of these theories include the "thermogenesis hypothesis" which suggests that the rise in core body temperature through exercise is responsible for reducing depression (2). Another hypothesis called the "endorphin hypothesis" suggests that the brain releases beta-endorphins, which are known to elevate mood and promote a sense of well-being (2). The most promising of the proposing physiological theories linking exercise and depression is known as the "monoamine hypothesis." This hypothesis suggests that exercise improves depression by increasing brain chemicals such as serotonin, dopamine and norepinephrine , which are known to be decreased in depression (2). Although many RCTs and physiological theories have attempted to demonstrate a relationship between exercise and depression, it must be noted there is no concrete data that supports the exact mechanisms by which exercise confers positive effects on depression (3). The known discoveries however suggest that there is a dire need for clarity on these unique bio-psychological relationships. This review investigates whether exercise is effective in improving depressive symptoms among patients with depression and holds potential to ascertain novel interventions to treat this devastating mental illness.

No. 116

Hospital Utilization Rates Following Antipsychotic Dose Reductions Among Patients With Bipolar and Major Depressive Disorders

Poster Presenter: Benjamin Carroll

Co-Authors: Fan Mu, Rajeev Ayyagari, Sanjay Gandhi

SUMMARY:

Background: Antipsychotics are often used to treat mood disorders, such as bipolar disorder (BD) and major depressive disorder (MDD). Tardive dyskinesia (TD), an often-irreversible movement disorder, may develop after antipsychotic exposure. Typically, clinicians reduce antipsychotic dose to manage TD; however, benefits and risks of dose reductions have not been well studied. Objective: To analyze the healthcare burden and incidence of TD due to antipsychotic dose reduction in patients with BD and MDD. Methods: Medical claims from six US states spanning 6 years were retrospectively analyzed for ≥10% or ≥30% antipsychotic dose reductions versus those from patients receiving stable doses. Outcomes measured were inpatient admissions and emergency room (ER) visits for BD/MDD, all psychiatric disorders, and all causes. Additional analyses were done to evaluate antipsychotic dose reduction with respect to the incidence of TD. Results: There were 23,992 and 17,766 cases in the

BD and MDD populations, respectively. Patients with ≥10% dose reduction had an increased risk of admission or ER visit for BD (hazard ratio [HR] 1.22; 95% CI 1.15, 1.31; P<0.001), MDD (HR 1.22; 95% CI 1.11, 1.34; P<0.001) and all psychiatric disorders (BD: HR 1.19; 95% CI 1.13, 1.24; P<0.001 and MDD: HR 1.17; 95% CI 1.11, 1.23; P<0.001) versus controls. Furthermore, BD and MDD patients with ≥10% dose reduction had increased risk of an all-cause inpatient admission or ER visit. Antipsychotic dose reduction of ≥10% was not shown to reduce the incidence of TD in MDD (Number of events = 18; HR 2.34; 95% CI 1.05, 5.21; P=0.04) or BD (Number of events = 17; HR 1.95; 95% CI 0.90, 4.22; P=0.09) patients who did not have TD at baseline. There were similar findings in those patients who had a ≥30% dose reduction. Conclusions: Results showed significant increases in all-cause and mental health–related hospitalizations/ER visits, suggesting that antipsychotic dose reductions may increase overall healthcare burden in BD and MDD patients. There is a need for a TD treatment option that does not disrupt optimal antipsychotic regimens. In patients without TD at baseline and a dose reduction in their antipsychotic, results did not show a relationship in antipsychotic dose reduction and a reduction in TD incidence. Future analyses should robustly examine this relationship between antipsychotic dosing and the incidence of TD in larger patient populations to overcome the limitation of the small number of events in the current dataset. This study was supported by Teva Pharmaceutical Industries, Petach Tikva, Israel.

No. 117

Whole Blood Viscosity in Manic, Depressive, and Euthymic Stages of Bipolar Disorder

Poster Presenter: Nesrin Karamustafalioglu
Lead Author: Tevfik Kalelioglu
Co-Authors: Murat Kocabiyik, Burcu Kok Kendirlioglu, Pelin Ünalan Özperçin, Sule Sözen, Ozge Yuksel

SUMMARY:

Introduction: Bipolar disorder (BD) is associated with increased rates of cardiovascular diseases. There is a growing evidence that blood viscosity may have a common role, correlated with well-known major risk factors that promote cardiovascular disease [1]. Basically, viscosity can be defined as stickiness and thickness of blood. Internal friction that develops between adjacent layers of flowing blood causes an intrinsic resistance which is also called as viscosity. The velocity gradient during blood flow is called the shear rate. Viscosity is relatively high at low shear rates (LSR), as when blood is moving at a low velocity during diastole. At high shear rates (HSR), as during systole, viscosity relatively decreases [2]. In this study we aimed to investigate the whole blood viscosity (WBV) in different stages of BD and compare with healthy controls. Method: A total of 121 bipolar patients and 41 age-gender matched healthy controls were included. Forty-four of bipolar patients were in manic, 35 were depressed and 42 were in euthymic state. Total biochemical evaluation and hemogram tests were performed for all participants. WBV was calculated from hematocrit and total plasma protein according to Simone's formula at low and high shear rates (LSR and HSR). According to this formula; Whole blood viscosity is calculated from hematocrit (HCT) and total plasma protein (TP) for; Low-shear rate (LSR) as 'WBV (0.5 sec-1) = (1.89× HCT) + 3.76 (TP -78.42)" and High-shear rate (HSR) as 'WBV (208 sec-1) = (0.12× HCT) + 0.17 (TP -2.07)"[3]. Results: WBV at HSR of manic group was 16.91± 1.01, depressive group was 17.23± 0.80, euthymic group was 17.63± 0.95, and control group was 17.52± 0.71 (p=0.001). WBV at LSR of manic depressive, euthymic and control group were 53.10± 20.58, 60.30± 17.02, 68.91± 20.33, 62.01± 19.28 respectively (p=0.001). Both WBV at HSR and LSR of manic group was significantly lower than that of the euthymic and control groups (p=0.001 and p=0.010 respectively for HSR, p=0.001 and p=0.011 respectively for LSR). Other pairwise comparisons of groups for WBV were insignificant. WBV was significantly negatively correlated with number of previous manic episodes and positively correlated with lipid profile except high density lipoprotein (HDL). Conclusion: Interestingly, viscosity was significantly lowest in manic group compared with controls. When we investigated the literature about cardiovascular risk factors at different stages of BD, in terms of lipid profile, we found that the risk of cardiovascular disease was similar to that of our findings in manic episode [4,5]. Our results demonstrate a decrement in blood viscosity in manic episode compared with euthymics and controls. Positive correlation of blood viscosity with lipid

parameters (except HDL), and negative correlation with number of previous manic episodes suggest that manic episode has positive effect on cardiovascular risk regarding to blood viscosity.

No. 118

Serum Osmolarity in Manic Episode

Poster Presenter: Nesrin Karamustafalioglu
Lead Author: Tevfik Kalelioglu
Co-Authors: Abdullah Genc, M.D., Murat Kocabiyik

SUMMARY:

Bipolar disorder (BD) is a severe mental disorder with episodes of elevated (mania- hypomania) and depressed mood. Disturbances of fluid and electrolyte balance have been reported in acute exacerbations of BD. Serum osmolarity has an important role in water distribution between body compartments and particularly depends on the concentrations of sodium (Na+), glucose and urea. In the current study, we aimed to investigate serum osmolarity in patients with bipolar disorder who were in manic episode. Methods: Bipolar Disorder inpatients who were in manic episode were included in the study. Diagnosis of patient groups was established by a consensus of two senior psychiatrists following a structured psychiatric interview according to Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR). Serum osmolarity (mOsm/L) was calculated according to formula that takes into account serum Na+, blood urea nitrogen (BUN), and glucose as; (2× Na+) + (BUN/2.8) + (Glucose/18). Results: Sixty-eight male inpatients with manic episode and 60 age-gender matched healthy controls were included in the study. Serum osmolarity of manic patients was 295.34±4.90 mOsm/L and control group was 298.46±5.33 mOsm/L. Serum osmolarity of manic group was significantly lower than the controls ($p<0.001$). Discussion: In our current study we tested the hypothesis that mania might be associated with diminished serum osmolarity. The hypothesis is based on the indirect findings of hemodilution in manic episode from early literature. Consistent with our hypothesis, we found a signi?cant decrement for serum osmolarity in patients hospitalized with an acute manic episode, compared to healthy controls. Regulation of serum osmolarity is particularly maintained by the antidiuretic effect of arginine vasopressin (AVP) hormone. In case of increased osmolarity, AVP is released by the pituitary gland and inappropriate increase of AVP causes hyponatremia and hemodilution. AVP has been considered to have a role in the pathogenesis of mood disorders. Pharmacological data support the hypothesis that AVP function is augmented in manic and diminished in depressive episode. This data have been also confirmed in a longitudinal study by Hochman et al. In this study; hematocrit, hemoglobin and albumin values were used as indirect measures of hemodilution/hemoconcentration. The authors have reported that; during manic episodes, the hemoglobin, hematocrit, albumin, and sodium concentrations were lower than in depressive episodes, suggesting that manic state is characterized by a relative hemodilution and depression is associated with hemoconcentration. Decreased serum osmolarity of manic patients in our study may be a reflection of such a hemodilution.

No. 119

Insulin Resistance Is Associated With a Leaky Blood-Brain Barrier in a Network of Specific Brain Regions in Patients With Bipolar Disorder

Poster Presenter: Cynthia V. Calkin, M.D.
Co-Authors: Lyn Kamintsky, M.Sc., Kathleen Cairns, B.Sc., Chris Bowen, Ph.D., Alon Friedman, M.D., Ph.D.

SUMMARY:

Background: In previous studies we found that insulin resistance (IR) and type-2 diabetes (T2D) are associated with a more chronic course of bipolar disorder (BD), poor response to mood-stabilizing treatment, cognitive impairment and adverse changes in brain structure and chemistry. These findings suggest that IR comorbidities, such as microvascular pathology and related blood-brain barrier dysfunction (BBBD), may play a role in the "neuroprogression" of BD. Indirect evidence of BBBD has been reported in both psychiatric and neurodegenerative pathologies based on serum/CSF markers or post-mortem tissue analysis. Using our recently developed approach for MRI-based assessment of BBB permeability, here we aim to present the first mapping and quantification of BBBD in living patients with BD. Moreover, this novel

imaging protocol will allow us to test the predictive power of BBBD as a biomarker for neuroprogression and pharmacoresistance in bipolar patients with IR. Methods: Dynamic contrast-enhanced MRI (DCE-MRI) was used to map BBB permeability in BD patients with- and without-IR (BD+IR, n=22; BD-IR, n=15), healthy controls (HC, n=7) and individuals with IR alone (n=4). Cognitive, psychiatric and clinical information was collected with every scan. Results: Kernel-density based clustering revealed two distinct groups: patients with high vs low % of brain voxels with BBBD ($p<0.0001$). The high BBBD group (n=11) consists entirely of BD patients, with overall 29.7% (11/37) of all BD patients presenting high levels of BBBD. Notably, patients in the high BBBD group scored significantly worse on the depression scale ($p=0.009$), with 9 of the 11 patients also having IR. Importantly, the high BBBD group showed microvascular pathology in specific brain regions, primarily left-temporal and medial-frontal cortices. Conclusions: Our novel BBBD imaging approach identifies a specific brain network with microvascular pathology that may be predictive of neuroprogression and pharmacoresistance.

No. 120

Anti-Cytokine Agent for Anhedonia: Investigating the Immune-Inflammatory System as a Therapeutic Target for Dimensional Disturbances in Mood Disorders

Poster Presenter: Yena Lee
Co-Author: Roger S. McIntyre, M.D.

SUMMARY:

Aims: To investigate the efficacy of infliximab--a biologic that targets the pro-inflammatory cytokine tumour necrosis factor alpha--on a measure of anhedonia amongst adults with bipolar I/II depression exhibiting baseline inflammatory activation. We additionally aim to investigate cellular and molecular substrates that may characterize a subset of patients who are more likely to benefit from anti-inflammatory treatments. Methods: Adults (ages 18-65) with bipolar I/II disorder currently experiencing a major depressive episode are randomized to adjunctive infliximab (5 mg/kg) or saline control as part of a phase II, double-blind, 12-week clinical trial. Treatment is administered at weeks 0, 2, and 6. Inclusion criteria include: baseline inflammatory activation (as determined by one of: C-reactive protein level of 5 mg/L or greater; central obesity and dyslipidemia/hypertension; daily cigarette smoking; diabetes mellitus; inflammatory bowel disease); Hamilton Depression Rating scale 17-item total score of 20 or greater or Montgomery-Asberg Depression Scale total score of 22 or greater; Young Mania Rating Scale total score of less than 12. Primary outcome measure is changes in the Snaith-Hamilton Pleasure Scale total score (i.e. week 0 vs. 12) between placebo- and infliximab-treated subjects. Secondary outcome measures include peripheral markers of neuroplasticity, inflammation, and oxidative stress. Results: The clinical trial is expected to complete in March 2018 (n=60). As of December 2017, 230 individuals have signed informed consent; 56 individuals have been randomized to treatment; 44 subjects have completed the study; and 2 subjects are currently receiving active treatment or in follow-up. We hypothesize that modulation of the inflammatory systems will reduce symptoms of anhedonia in subjects with bipolar I/II depression exhibiting baseline inflammatory activation. Conclusions: Positive results from the proposed proof-of-concept study would instantiate the relevance of inflammatory systems in the phenomenology, and possibly patho-etiology, of mood disorders. Moreover, a positive result would provide the impetus to develop scalable treatments targeting inflammatory systems to mitigate transdiagnostic disturbances like anhedonia.

No. 121

When Psychotic Mania Occurs for the First Time in a Peculiar Moment of Life, the Oncological Treatment: A Case Report

Poster Presenter: Maira Rodrigues
Lead Author: Maira Rodrigues
Co-Authors: Larissa Lobo, Leonardo De Jesus

SUMMARY:

Female, 50 years old, married, three daughters, comes to the Psychiatric Facility at Mario Covas' State Hospital, with history of depressive episodes during life (three episodes), being treated with antidepressants. On December 2014 was diagnosed with lung cancer of small cells and presented with esophagus metastasis. Went through oncological

treatment on January 2015, with chemotherapy and radiotherapy on lungs and the skull prophylactically. On the beginning of 2017 presented with metastasis on liver and vertebra and rebooted chemotherapy. After, was submitted to two sessions of immunotherapy (on July and August 2017), but this treatment resulted on injury at liver function, and then was dropped out. At that time, it was necessary to return on chemotherapy, which patient is submitted to sessions weekly, for two weeks and then suspended. Patient considered immunotherapy as "her salvation" and when this procedure didn't show up any results, was very disappointed. On September 2017 started with behavior alteration, decreased need for sleep, psychomotor agitation, increase in financial expenses, angry mood and labile affect. On the beginning of October began with heteroaggressiveness, arguing on public places, threatened to sue her oncologist. At the week before hospitalization, started presenting with disorganized behavior, couldn't cook, mixed medications and occasionally was heteroaggressive towards her daughter. At the beginning of October 2017, stayed hospitalized at Santa Catarina Hospital for six days due to psychomotor agitation. Exams didn't show up a condition that could justify those symptoms, and she was discharged with the diagnosis of "psychotic outbreak". It was necessary to bring her back to the Hospital, as she remained very agitated and aggressive, but she evaded on the dawn. Family called EMS (Emergency Medical Service) and patient was taken to Santo Andre's Hospital Centre and then to Mario Covas' State Hospital. At the beginning of hospitalization, patient presented with dysphoric behavior, little collaborative with the hospitalization, with disorganized attitude, claiming for discharge from hospital, expanded mood, without criticism of morbidity. There was no previous story of maniac symptoms like the current ones. Evolved with improvement on mood and content of thought using Risperidone 2mg/day, Lithium carbonate 900mg/day and Chlorpromazine 25 mg/day. Kept with haughty attitude and irritable mood on a few moments, but without risk of heteroaggressiveness, calm and collaborative. Patient was discharged after ten days of hospitalization with diagnosis of Bipolar Affective Disorder Type I with psychotic symptoms (CID F31.6-CID 10) and was forwarded to psychiatric and oncologic treatments.

No. 122

Dissociation or Schizophrenia? Report of a Challenge Diagnosis

Poster Presenter: Maira Rodrigues
Lead Author: Maira Rodrigues
Co-Authors: Larissa Lobo, Maria Lucia, Natalia Santos, Leonardo De Jesus

SUMMARY:
A 43-year-old female patient was followed during hospital stay for 34 days, due to a multifaceted dissociative psychopathological condition that resulted in the breakdown of her functionality in the occupational and social spheres. Throughout the hospitalization she presented several phenomena such as dissociative amnesia, depersonalization, derealisation, reports of psychotic experiences and stuttering. According to information given by her family, the patient went through traumatic periods throughout her life, including sexual abuse by her father and repetition of pedophile behavior as a teenager, abusing four children from her own family. Three years before her hospitalization, she went through paranoid experiences and possession, as well as moments in which she appropriated herself in another identity. We aim to discuss the diagnostic challenges of a dissociative identity disorder and its patoplasty within Latin American culture.

No. 123

Mismatch Negativity and Frontal Cortical Thickness in Patients With Schizophrenia and Bipolar Disorder

Poster Presenter: Sungkean Kim
Lead Author: Seung-Hwan Lee
Co-Authors: Yong-Wook Kim, Jeong In Kim, Sunhae Jeon, Chang-Hwan Im

SUMMARY:
Background and aims Mismatch negativity (MMN) is a measure of automatic neurophysiological process of brain for detecting unexpected sensory stimuli. This study investigated MMN deficit in patients with schizophrenia and bipolar disorder and examined whether cortical thickness are associated with MMN. Materials and methods The electroencephalogram was measured in 38 patients with schizophrenia, 37 patients with bipolar disorder, and 32 healthy controls while they performed a passive auditory

oddball paradigm. All participants underwent a T1 structural magnetic resonance imaging scan to investigate cortical thickness for regions of MMN generator. Three MMN amplitudes were analyzed in 3 regions (frontal, frontocentral, and central). Results Patients with schizophrenia and bipolar disorder exhibited significantly reduced MMN amplitude compared to healthy control. Bipolar disorder showed intermediate MMN amplitudes among 3 groups. There were significant negative correlations between frontal MMN and cortical thickness of right superior temporal gyrus (STG) and left middle frontal sulcus in schizophrenia. In bipolar disorder, frontal MMN was significantly correlated with cortical thickness in left anterior cingulate gyrus and sulcus, right inferior frontal gyrus, right middle frontal gyrus, and right STG. MMN showed negative correlations with social and occupational functioning scale in schizophrenia, while with Korean auditory verbal learning test delayed recall in bipolar disorder. Conclusions MMN deficit was associated with cortical thinning in both frontal and temporal areas in patients. MMN was associated with functional outcomes in schizophrenia while it was associated with neurocognitive function in bipolar disorder.

No. 124

Differential Prevalence and Demographic and Clinical Correlates of Antidepressant Use in American Bipolar I Versus Bipolar II Disorder Patients

Poster Presenter: Shefali Miller

SUMMARY:

Aims: Antidepressant use is controversial in bipolar disorder (BD) due to questionable efficacy/psychiatric tolerability. We assessed demographic/clinical characteristics of baseline antidepressant use in BD patients. Methods: Prevalence and correlates of baseline antidepressant use in 503 BD I and BD II outpatients referred to the Stanford Bipolar Clinic during 2000-2011 were assessed with the Systematic Treatment Enhancement Program for BD (STEP-BD) Affective Disorders Evaluation. Results: Antidepressant use was 39.0%, overall, and was higher in BD II versus BD I (46.9% versus 30.5%, p = 0.0002). BD I (but not BD II) antidepressant users had significantly higher rates of Caucasian race, lifetime eating disorders, ≥1 first-degree relative with mood disorder, prior suicide attempt, and higher CGI-BP-OS scores; whereas BD II (but not BD I) antidepressant users were significantly older, less likely to have a college degree, had longer illness duration, higher rate of long (>15 years) illness duration, less often had current irritability and more often were taking mood stabilizers. Both BD I and BD II antidepressant users had higher rates of current anhedonia, complex pharmacotherapy and use of other psychotropics. Antidepressant use in BD II versus BD I was higher during euthymia (44.0% vs. 28.0%) and subsyndromal symptoms (56.1% vs. 28.6%

No. 125

Pregnancy and Childbearing in Women Psychiatrists

Poster Presenter: Sharvari Pradip Shivanekar, M.D.
Co-Authors: Morgan Faeder, M.D., Ph.D., Priya Gopalan, M.D., Darcy Marie Moschenross, M.D., Ph.D., Neeta Shenai

SUMMARY:

Background: Childlessness is a major public health concern in the United States, particularly among educated adults. By age 32, fewer than half the childless women who want a baby will have one. By age 45, more than 1 in 10 women will be childless, but still want to have a baby. Experts largely attribute this trend in childlessness to delays in childbearing related to increased participation of women in the workforce and their pursuit of educational achievement. The emotional and physiologic stresses of medicine are incomparable to other occupations and add particular hazards to physician pregnancies. We wanted to search the literature to determine if the topic of physicians' pregnancies and related challenges has been addressed in the field of psychiatry. Methods: A search of the literature was conducted on Pubmed, Scopus, Ovid and Cochrane using the following keywords: women physicians, female physicians, fertility, childbearing, pregnancy, pregnant, pregnancy complications, residency training, residency education, internship and residency, early career, graduate medical education. Results: Women in many medical specialties such as urology, radiation oncology, general surgery, orthopedics have reported higher maternal age at first

pregnancy, higher rates of pregnancy complications, hostility from male and female colleagues, perceived and real threats to career. Except for a few literature reviews, no empirical studies were found on this topic in the field of psychiatry. Conclusion: There is a paucity of literature related to pregnancy in women physicians in psychiatry. We propose to follow this review with a survey to assess issues related to pregnancy and childbearing in women psychiatrists and psychiatric trainees. Our survey may help address some of the challenges faced by women psychiatrists in career development and maintaining a work-life balance.

No. 126

Effectiveness of Psychoeducational Family Intervention (PFI) on the Coping Strategies of Relatives of Patients With Bipolar I Disorder

Poster Presenter: Gaia Sampogna, M.D.
Co-Authors: Valeria Del Vecchio, Mario Luciano, Vincenzo Giallonardo, Giuseppina Borriello, Micaela Savorani, Benedetta Pocai, Andrea Fiorillo, M.D., Ph.D.

SUMMARY:
Relatives' coping strategies are an essential element for the recovery of patients with severe mental disorders. Coping strategies are grouped in problem-oriented, including practical strategies to deal with stressful situations and are associated with a better long-term outcome of patients and relatives, and emotion-focused coping strategies, that are psychologically driven and are associated with a worse outcome. It has been reported that Psychoeducational Family Intervention (PFI) can improve problem-oriented coping strategies, although a few data are available on relatives of patients with bipolar disorder. To assess the impact of PFI on the promotion of problem-oriented coping strategies adopted by relatives of patients with bipolar I disorder, the presented study has been conducted in 11 randomly selected Italian mental health centers. Patients and their relatives were allocated to the experimental (receiving PFI) or to the control group (waiting list). Before starting the intervention and at the end of the PFI, coping strategies were assessed using the Family Coping Questionnaire. Of the 139 recruited families, 72 were allocated to the experimental group and 67 to the control group. Relatives from the experimental group reported a significant improvement in problem-oriented coping strategies, such as positive communication ($p < .01$) and searching for information ($p < .05$). A reduction in collusion ($p < .0001$), avoidance ($p < .01$) and resignation ($p < .001$) were also found at the end of the intervention. PFI is effective in promoting coping strategies in relatives of patients with bipolar I disorder and they should be provided routinely in mental health centers.

No. 127

Are Social Networks Useful to Challenge Stigma Attached to Mental Disorders? Findings From the Time to Change Social Marketing Campaign 2009–2014

Poster Presenter: Gaia Sampogna, M.D.
Co-Authors: Mario Luciano, Valeria Del Vecchio, Benedetta Pocai, Micaela Savorani, Giuseppina Borriello, Vincenzo Giallonardo, Andrea Fiorillo, M.D., Ph.D.

SUMMARY:
The new channels of communication as social media (e.g., Facebook and Twitter) and the social marketing campaign (i.e., campaign focused on enabling, encouraging and supporting behavioural changes among target audiences) can represent useful strategies to challenge stigma attached to mental disorders. In England, during 2009-2014, it has been carried out the Time To Change (TTC) campaign, which has included a Social Marketing Campaign (SMC). The efficacy of the SMC has been evaluated in terms of: 1) use of the social media channels; 2) levels of awareness of the SMC-TTC; 3) changes in knowledge, attitudes, and behaviour related to mental disorders in the target population. Participants completed the Mental Health Knowledge Schedule (MAKS), the Community Attitudes toward Mental Illness (CAMI), and the Reported and Intended Behaviour Scale (RIBS), together with an ad-hoc schedule on socio-demographic characteristics. 10,526 people were interviewed, it was found a growing usage of the SMC-TTC media channels and of the level of awareness of the campaign ($p<0.001$). Being aware of the SMC-TTC was found to be associated with higher score at MAKS (OR=.95, CI= .68 to 1.21; $p<.001$), at 'tolerance and support' CAMI subscale

(OR=.12, CI=.09 to.16; p<.001), and RIBS (OR=.71, CI=.51 to .92; p<.001), controlling for confounders. SMC-TTC has been found to be effective in improving attitudes and behaviours of the general population towards people with mental disorders. Considering these promising results from UK, social media can represent a possible effective strategy for challenging stigma. The future on-going evaluation of the SMC-TTC may further shed light on the role of social media in reducing of stigma and discrimination.

No. 128

Psychoeducational Family Intervention in Routine Care: Benefits and Difficulties Reported by Mental Health Professionals

Poster Presenter: Giuseppina Borriello
Co-Authors: Mario Luciano, Gaia Sampogna, M.D., Valeria Del Vecchio, Benedetta Pocai, Micaela Savorani, Vincenzo Giallonardo, Andrea Fiorillo, M.D., Ph.D.

SUMMARY:
Despite several guidelines recommend the use of psychoeducational family interventions (PFIs) as add-on in the treatment of patients with bipolar I disorder, their implementation on a large scale remains limited. In Italy, it has been recently promoted a multicentre, real-world, controlled, outpatient trial, carried out in 11 randomly recruited Italian mental health centres. Mental health professionals received a training on PFI and provided the intervention to patients with bipolar I disorder and their relatives. Difficulties and benefits in running PFI were collected through an ad-hoc schedule, which was administered at baseline and 5 times during the different stages of the intervention. Mental health professionals reported significant improvements over time as regards intervention-related benefits (T0=5.3±2.0 vs T5=7.9±0.9; p<.0001), in particular their professional skills (T0=6.5±2.3 vs T5=8.0±0.8; p<.01). They also reported to be more satisfied with their own work (T0=6.6±2.3 vs T5=8.0±1.3; p<.05). The most relevant difficulties, which did not decrease over time, were the need to integrate the PFI with other work responsibilities and lack of time to run the intervention. PFIs are feasible in routine care for the treatment of patients with bipolar I disorder and their relatives; the main difficulties are related to the organization of mental health centres, and not to the characteristics of the intervention itself.

No. 129

Repetitive Transcranial Magnetic Stimulation (rTMS) Therapies Reborn at the Institute of Psychiatry, ASU, Egypt: First Preliminary Report

Poster Presenter: Adel Sayed Marei, M.D.

SUMMARY:
Background Ibrahim Pasha's University (established around 1950), which was later changed to "Heliopolis" (February 1954) in reference to the historic "O'n" university in ancient Egypt then later the same year, the name "Ain Shams" University was adopted which is the Arabic Translation to "Heliopolis". It is regarded as the third-oldest non-sectarian native public Egyptian university. Initially, there university hosted eight faculties which included the Faculties of Medicine. Currently the university's academic structure includes 14 faculties, 1 college and 2 high institutes plus 12 centers and special units. Amazingly, the current grounds for the faculty of medicine and its hospital out dated the establishment of the university itself. The current location in Abbasia, Cairo Egypt, is still known by its original name; Demerdash hospital which was founded in 1928 and official opening 1931. The neuropsychiatry department at Demerdash Hospital was growing so fast by mid 1980s and it was essential to expand. In about 1989, the Institute of Psychiatry was established with about 80 beds. In 2011, the name of the institute was changed to Okasha Institute of Psychiatry denoting Prof. Ahmed Okasha's great efforts in promoting the psychiatric services not only in Egypt but also the Arab world. The Neurophysiology unit at the institute was nurtured by Prof. Tarek Asaad, also regarded as the Godfather of Sleep Medicine in the Arab world. The unit grew from performing a hand full of Electroencephalograms (EEG) and Polysomnograms (PSG) to serving over an average of 250 patients a month. 1st Preliminary rTMS report Before stimulation patients are subject to medical history, psychiatric and psychometric evaluations, EEG and audiometry investigations. The latter are repeated when patients finish their sessions alongside the evaluations. Since the installment of the new

therapeutic MagVenture Pro 60 in December 2015, the unit has performed 2826 rTMS therapeutic sessions (mean per month 113 sessions) serving 112 patients working six days a week. Some of these patients were enrolled in one of the ongoing studies in three different protocol based Autism Spectrum Disorder (ASD) [49 cases], two different protocol based Attention Deficit Hyperactivity Disorder (ADHD)[10 cases], Depression [33 cases], Substance Use Disorder (SUD) and negative symptoms in schizophrenia [12 cases]. Only one of these studies has been finalized but not yet published. Other cases that have received treatments are 4 cases of Obsessive Compulsive Disorder (OCD), 2 cases of Parkinson Disease (PD) and 2 cases of Traumatic Brain Injury (TBI). 68 of our patients received multiple brain area stimulation i.e. "Cathodal/Anodal Technique of rTMS". Age of patients ranged from 3 to 65 years old. The only decisive data that we could conclude at this time is that none of the patients complained of seizures or hearing problems.

No. 130

"Introducing Psychiatric Rehabilitation" Illness Management and Recovery in Pakistan in Collaboration With Rutgers School

Poster Presenter: Ajmal Kazmi, M.D.

SUMMARY:

This presentation describes the collaboration between a comprehensive community mental health facility in Karachi, Pakistan, Karwan-e-Hayat, and Department of Psychiatric Rehabilitation & Counseling Professions, Rutgers School of Health Related Professions New Jersey, U.S. This training was fostered and supported by a voluntary U.S. based organization, Carvan of Life. In the Fall of 2008 faculty from the Department provided on-site consultation and training to selected Karwan-e-Hayat staff members and other invited professionals. The 17 week process was carried out via WebCT (an internet distance learning platform), SKYPE,ooVoo and e-mail. Prior to this training Professor Smith visited Karwan-e-Hayat to meet staff, interview prospective trainee and learn about the facility. The consultation and training process continues with the eventual introduction of modified evidenced based practices into existing day programming and inpatient services. This presentation describes (1) the technical aspects of the process including Web based learning and SKYPE ooVoo, (2) the assessment of service needs through their visit and the on-going consultation and training (3) differences and similarities between U.S. evidence-based practices and services at Karwan-e-Hayat, (4) the process from the perspective of Karwan-e-Hayat, (5) plans for implementations of evidence-based practices Illness Management and Recovery(IMR). Discussion of the Illness Management and Recovery (IMR) group includes questions of appropriate fidelity measures, facilitator training and supervision and methods of on-going evaluation of the process (6) Training of the trainer program through Web based and SKYPE and to develop a Psychiatric Rehabilitation training center in Karachi Pakistan (7) Impact of training on the practitioners (8) success and difficulties in implementation of the program and (9) views of clients and their families about the benefits of the program.

No. 131

Early Intervention in Psychosis: Analysis of Long-Acting Injectable Antipsychotics (LAI) in the First-Episode Psychosis Program in Ciudad Real, Spain

Poster Presenter: Carlos Rodríguez Gómez-Carreño
Co-Author: Fernando García Lázaro

SUMMARY:

Introduction: The prevalence of psychotic disorders in the general population is 3%, with a habitual beginning at the end of adolescence or early adulthood (between 15 and 30 years), implying significant personal, social and healthcare costs. The latest lines of research show that it is essential to implement early care programs in first psychotic episodes in order to achieve remission of symptoms and to carry out a good follow-up later. We evaluated a sample of 20 cases with detection of the first psychotic episode, included in the program of First Psychotic Episodes at Ciudad Real Hospital, Spain. We analyze the treatments used in the 4-year follow-up. Results: In our sample, patients undergoing treatment with LAI had a more regular follow-up and had a lower dropout rate than patients who started oral treatment. Regarding the psychosocial resources used, patients undergoing treatment with LAI made greater use of these rehabilitation devices. In relation to the definitive

diagnosis after 4 years of follow-up, the patients who had treatment with LAI maintained during these years were mostly diagnosed with schizophrenia. Conclusions: The results obtained propose a change in the strategy to treat the first psychotic episodes. Early initiation and ensuring correct adherence is a protective factor in the treatment of psychosis. The LAI would be treatment with a good balance in relation to its efficacy, side effects and benefits in therapeutic adherence. The reviews of the clinical guidelines of treatment in early intervention in psychosis begin to position the LAI as therapeutic recommendations. In our study, patients who used these treatments had access to rehabilitative psychosocial resources that enable a functional recovery of the patient.

No. 132

About Sound Rhythm in the Therapeutic Management of Aggressive Behavior in Young People Suffering From Deafness

Poster Presenter: Marc Passamar
Co-Author: Hafid Belhadj-Tahar

SUMMARY:

In France metropolitan, 5 182 000 people have hearing loss (8.7% of the population), of which 4.1% are under 20 years of age. In children, hearing impairment is sought in the presence of depression, hyperactivity, impulsivity, instability accompanied by intense anger, and aggressive behavior. So far, the impact of dance and music on deaf people has been little studied. In this context, we recently initiated a project in mediated therapeutic workshops; Devoted to hearing-impaired adolescents or young adults with behavioral problems. The main objective of this project is to foster the adaptability of these young people with severe behavior problems. Protocol: 4 volunteers with moderate to profound deafness were included in this prospective study (2 F and 2 M, aged 19.5 ± 5.0 years). These patients exhibited daily behavioral disorders with stereotypies and aggressiveness with moderate to severe intensity according to the Behavior Problems Inventory (BPI-01). These young people attended weekly sessions lasting more than 12 months at the Music / Percussion Workshop in the presence of an instructor and nurse therapist. Outcome and Discussion: No voluntary withdrawal of the project was recorded. A very strong behavioral improvement was noted in 3/4 of the cases and a slight improvement in 1/4 of the cases. This study has shown that hearing loss is compensated by various adaptive processes, in particular by multi sensorial interactivity (such as the interactivity between touch and vision) and through mirror neuronal system. Conclusion: This study showed hearing impaired people are sensitive and receptive to the sound world and to rhythmic movement. This finding has been put to the benefit of rehabilitation through Music and Dance Therapies which has improved the behavioral disorder and blossoming of the group rehabilitation through Music and Dance Therapies of young people suffering from medium to profound deafness with severe behavior problems.

No. 133

Post Hoc Analyses Suggest Baseline Sleep Quality Influences the Effects of SHP465 Mixed Amphetamine Salts (MAS) Extended-Release in Adults With ADHD

Poster Presenter: Craig B. Surman, M.D.
Co-Authors: Norman Atkins, Brigitte Robertson, Yi Chen, Samuele Cortese, M.D., Ph.D.

SUMMARY:

Introduction: Sleep problems, such as abnormal sleep quality, are common in adults with attention-deficit/hyperactivity disorder (ADHD). These sleep issues may impact responses to ADHD treatment. Previous analyses have explored general sleep quality changes following stimulant treatment, but have not examined the potential impact of baseline sleep quality on treatment response. Objective: To assess whether baseline sleep quality impacts the response to treatment with SHP465 mixed amphetamine salts (MAS) extended-release on ADHD symptoms and executive function, measured using the ADHD Rating Scale–IV (ADHD-RS-IV) and Brown Attention Deficit Disorder Scale (BADDS), respectively. Methods: Adults (18–55 years old) with DSM-IV-TR-defined ADHD and baseline ADHD-RS-IV total scores ?24 were randomized to SHP465 MAS (12.5–75 mg) or placebo in a 7-week, double-blind, dose-optimization study. In these post hoc analyses, we evaluated the hypothesis that sleep quality at baseline (measured by Pittsburgh Sleep Quality Index [PSQI] component scores) would predict

changes from baseline to endpoint (average of weeks 5–7 or last postrandomization assessment if weeks 5–7 data were missing) on the ADHD-RS-IV and from baseline to week 7/early termination (ET) on the BADDS in 2 participant subgroups: sleep quality impaired (PSQI component scores of 2 or 3) and sleep quality not impaired (PSQI component scores of 0 or 1). Analyses were conducted in the intent-to-treat population (ITT) using MMRM for the ADHD-RS-IV and ANCOVA for the BADDS. Analyses were adjusted for baseline age, body mass index, lifetime insomnia and depression, and baseline outcome values (ADHD-RS total scores or BADDS total scores). Results: The ITT population included 132 placebo and 136 SHP465 MAS participants. Least squares mean (LSM) treatment differences (95% CI) nominally favored SHP465 MAS over placebo in both subgroups across PSQI components (all nominal P<0.001) for ADHD-RS-IV total score change from baseline to endpoint (days dysfunctional due to sleepiness [impaired: –9.5 (–13.7, –5.3); not impaired: –7.8 (–10.9, –4.7)], sleep disturbance [impaired: –10.6 (–15.0, –6.3); not impaired: –6.8 (–9.8, –3.7)], sleep latency [impaired: –7.7 (–11.7, –3.7); not impaired: –8.8 (–12.1, –5.6)] and for BADDS total score change from baseline to week 7/ET (days dysfunctional due to sleepiness [impaired: –18.7 (–28.5, –9.0); not impaired: –15.7 (–23.0, –8.4), sleep disturbance [impaired: –18.1 (–28.6, –7.7); not impaired: –15.2 (–22.1, –8.2)], sleep latency [impaired: –14.3 (–23.7, –4.8); not impaired: –17.7 (–25.1, –10.2)]. Conclusions: In adults with ADHD, improvements in ADHD symptoms and executive function occurred on dose-optimized SHP465 MAS with or without baseline impairment in aspects of sleep quality. Further analyses are needed to explore how changes in sleep quality may mediate improvements in ADHD symptom measures and executive function. (Sponsored by Shire Development LLC, Lexington, MA)

No. 134

Survey of Prescribers on Current Practices and Attitudes, Anticipated Responses, and Barriers to Deprescribing in Psychiatry

Poster Presenter: Swapnil Gupta, M.D., M.B.B.S.
Co-Authors: Rebecca Miller, Ph.D., John Cahill, M.B.B.S., Roberto Montenegro, M.D., Ph.D., Anthony Pavlo

SUMMARY:

1. Introduction: Deprescribing has been defined as the systematic process of identifying, discontinuing and/or reducing drugs in instances in which existing or potential harms outweigh existing or potential benefits considering medical status, current level of functioning, and patient values and preferences 1. In mental health settings, there is a great lack of structured, multi-dimensional approaches to medication reduction and/or discontinuation although there is some scattered and disparate data on discontinuation of antipsychotic medication 2. The goal of this survey is to elicit current practices, anticipated responses and barriers to deprescribing psychiatric medications. It is the first step in designing a multimodal intervention to reduce the use of psychotropic medication to as less as needed or safely possible. 2. Aims: i) to obtain information on a) current practices and attitudes b) anticipated responses b) barriers to deprescribing among psychiatric prescribers ii) to correlate practices, attitudes and barriers to age, gender, years in practice and setting of practice iii) to elicit differences in practices, attitudes and barriers to deprescribing antidepressants and antipsychotic medications. Methodology: Recruitment was conducted through an email that sent to professional organizations within the mental health field, providing information about the study. Interested participants accessed the study through the link included in the email, which took them to an informed consent about the study. If interested, they consented to the study by hitting the next link, without giving any identifying information. Survey answers were stored in Qualtrics, a statistical online safe account that is used to conduct online research. Data are being analyzed using SPSS Ver 24. The survey consisted of 54 questions out of which 9 questions were about demographics and practice location. The other questions tapped into domains of current practice, attitudes and barriers to deprescribing antidepressants and antipsychotic medications. Results: The survey was accessed 154 times and completed by 110 individuals. These consisted of 76 women and 34 men, mostly heterosexual (98) and Caucasian (78). 91 of these identified as psychiatrists with 16 psychiatry trainees. Most practiced in a community mental

health center (27) in an urban area (60). Prescribers had a more positive attitude towards deprescribing antidepressants compared to antipsychotic medications (one sample Wilcoxon signed rank test; $p<0.05$) and felt more knowledgeable and competent ($p<0.05$) doing so. By contrast, no differences were found in negative attitudes towards deprescribing antipsychotics compared to antidepressants. The fear of rehospitalization and litigation posed a significant barrier for deprescribing both antipsychotics and antidepressants but more so for the former.

No. 135

Psychotropic Idiosyncratic Drug Reactions: A Brief Review

Poster Presenter: Tanu Thakur
Co-Authors: James L. Megna, M.D., Ph.D., Lioubov Leontieva, M.D., Ph.D.

SUMMARY:

BACKGROUND: Idiosyncratic drug reactions are unpredictable events known to have serious morbidity and mortality. However there is little understanding on the pathophysiology underlying these adverse effects, specifically with psychotropic medications. METHODS: A literature search was conducted in Pubmed and Cochrane by using the following terms in varying combinations: idiosyncratic reactions, fluphenazine, chlorpromazine, escitalopram, clozapine, risperidone, quetiapine, olanzapine, sertraline, duloxetine, amitriptyline, nortriptyline, valproic acid, carbamazepine, drug induced liver injury, agranulocytosis, genome site and polymorphism. Case reports were excluded in order to have a review with articles reflective of a strong sample size. The Food and Drug Administration was contacted for updates on pre-existing knowledge on idiosyncratic reactions. Our intention was to analyze and integrate the proposed mechanisms from the existing scientific literature. RESULTS: Reported frequencies of idiosyncratic drug reactions range from an upper limit of 5% to as low as 1 in 10,000 to 100,000 individuals. However, these data are based upon reports describing non-psychotropic medications in most cases. Postulated mechanisms of idiosyncratic drug reactions include immune mediated and non-immune mediated types, which is supported by studies performed primarily on animal models but with some human data. Mechanisms suggested for idiosyncratic reactions are explored with emphasis on drug induced liver injury and agranulocytosis reactions with chlorpromazine and clozapine, respectively. Genetic factors are considered to be important commonalities with varying associated susceptibilities across different ethnicities. CONCLUSIONS: Idiosyncratic drug reactions are rarely, if ever, detected during randomized controlled trials, usually emerging during post marketing surveillance. We inferred that more mechanistic studies are needed so that surveillance can be improved and effective precautions be implemented. KEYWORDS: idiosyncratic reactions, psychotropics, inflammation, immune mediated, agranulocytosis, drug induced liver injury, polymorphism, genome site

No. 136

Seven-Year Experience With the Cymbalta Pregnancy Registry: A Prospective Observational Study to Assess Duloxetine Exposure During Pregnancy

Poster Presenter: Himanshu Upadhyaya
Co-Authors: Mark Edward Bangs, M.D., Renata Mehta, Hu Li

SUMMARY:

Background: Cymbalta (duloxetine hydrochloride) is a serotonin-norepinephrine reuptake inhibitor approved in the U.S. Many of the approved indications are prevalent in women of childbearing age. A pregnancy registry was established in July 2009 and is ongoing. The registry is overseen by an independent advisory committee, and managed by INC Research on behalf of Eli Lilly and Company (Lilly). The enrollment target is 484 pregnancies. Objectives: The primary objective of this prospective observational study is to estimate the risk of major congenital anomalies among pregnancies exposed to duloxetine during pregnancy in the U.S. Methods: This is an ongoing U.S.-based, voluntary, observational, exposure-registration and follow-up study of women taking duloxetine during pregnancy. Data are collected at study registration, the end of the second trimester, the outcome of pregnancy, and 4 and 12 months postpartum. Breastfeeding mothers complete a questionnaire at 3, 6, 9, and 12

months postpartum. Since the planned enrollment target is not yet reached, this report is based on a 7-year experience with the registry. Results: From July 2009 to August 2016, 97 prospective cases were enrolled: 85 with known pregnancy outcomes (83 live births including one set of twins, 2 spontaneous abortions, and 0 non-live births or fetal deaths), 4 with pending pregnancy outcomes, and 8 lost to follow-up. Reported outcomes included 8 premature births and 4 birth defects. 69 of which, including the birth defect cases, had exposure to Cymbalta in the first trimester. Pediatric follow-up has been received for 71 of the 84 prospective live born infants. Of the 71 infants with any pediatric follow-up, 2 infants experienced symptoms of neonatal withdrawal or poor neonatal adaptation and 7 infants were reported not to be developing normally for their age. Birth defect rates were not calculated due to the small number of reported cases. The registry has implemented series of awareness plan; however, the slow enrollment of patients has been a real challenge to the registry. Conclusions: The registry study supplements the ongoing monitoring of the safety of duloxetine in pregnancy. The inability to calculate accurate rates of birth defects due to the slow enrollment and small number of cases reported limits any reliable conclusions. Information regarding the Registry may be obtained by calling 1-866-814-6975 or by visiting www.cymbaltapregnancyregistry.com.

No. 137

Off-Label Baclofen in Movement and Alcohol Use Disorders

Poster Presenter: Marion Ester Wolf, M.D.

SUMMARY:

Baclofen, a selective GABA beta receptor agonist, has been used in the treatment of neurological conditions with spasticity since the late1960's, and in subsequent years it has been prescribed off-label in the management of movement and alcohol use disorders. We treated three patients with trunk tardive dystonia and five patients with choreoathetoid tardive dyskinesias of the mouth, face and extremities with baclofen. Therapy with this drug resulted in significant improvement of the movement disorder in the three tardive dystonia patients but no beneficial effects were observed in the five patients with choreoathetoid dyskinesias. Treatment with baclofen for the tardive dystonia patients was discontinued on account of appearance of side effects (mania, manic symptoms)(1).. In recent years, a regimen of high dose off-label baclofen emerged in France as a treatment for alcohol dependence and we have reviewed the literature on this topic. Although initial case reports and clinical trials showed efficacy for this regimen, these findings were not replicated in later studies. In clinical trials, no major adverse events were reported. However in general clinical practice it was noted initially that baclofen induced mania(2,3) and subsequently, evidence emerged of life threatening adverse events related to intentional or accidental intoxications with baclofen alone, or in combination with alcohol or other drugs(4). These overdoses lead to toxic syndromes associated with respiratory depression, coma, and in some cases even death(4); Braillon and Naudet(5) view the baclofen saga as evolving from miracle to mirage.

No. 138

Maintenance Ketamine Therapy for Treatment Resistant Depression: A Case Series

Poster Presenter: Shaina Archer, M.D., M.Sc.
Co-Authors: Carson G. Chrenek, M.D., M.B.A., Jennifer Swainson, M.D.

SUMMARY:

OBJECTIVE: Previous studies have demonstrated ketamine to have a rapid antidepressant effect in some patients with treatment resistant depression (TRD). While the antidepressant effect of ketamine can be robust, it is often short lived, with response peaking at 24 hours and a median time to relapse of 18 days. To date, there are few published reports that address the issue of sustaining the antidepressant effects of ketamine. Our objective was to review the safety, tolerability, and efficacy of the ongoing use of maintenance ketamine infusions for TRD at the Misericordia Hospital in Edmonton, Alberta, Canada. METHODS: This study is a retrospective case series, reporting on eleven patients with either unipolar or bipolar treatment resistant depression who received maintenance ketamine infusions. Maintenance ketamine treatment was defined as infusions received beyond an initial acute series of six to eight infusions. Charts

were reviewed to collect data on response to treatment as well as safety and tolerability. RESULTS: Eleven patients received maintenance ketamine treatment with the total number of ketamine infusions ranging from 10 to 51 infusions. All eleven patients in this case series were noted to have a reduction in their Beck Depression Inventory II (BDI-II) score following their acute course of six to eight ketamine infusions. Ten of the eleven patients receiving maintenance ketamine were found to have a lower median BDI-II during their maintenance treatments than their baseline BDI-II. While most patients reported transient side effects, there were no clinically significant adverse effects reported. At the study endpoint, four patients were continuing maintenance ketamine and one patient had transitioned to maintenance intranasal ketamine. Four patients discontinued ketamine due to loss of effect, one due to perceived side effects, and the reason for discontinuation was not available for the remaining two patients. CONCLUSION: Maintenance ketamine infusions may be an effective way of maintaining treatment response in ketamine responders. No major adverse events were noted in this case series of patients receiving maintenance treatments and it was well tolerated overall. The optimal duration and frequency of ketamine treatments is currently unknown. Future research is required to identify characteristics of patients likely to benefit from maintenance ketamine treatments, to determine optimal frequency and duration of treatment, and to monitor for adverse effects over a longer time period.

No. 139

Identity Narrative Density: Preliminary Findings From Scoring Emotional Valence of Autobiographical Events

Poster Presenter: Sofia K. Penev, M.D.
Co-Authors: Andrei Novac, M.D., Robert G. Bota, M.D., Austin Takeo Momii, Barton Jerome Blinder, M.D.

SUMMARY:
Autobiographical Memory is a form of declarative episodic memory known to have a significant role in identity, self-regulation and socialization. Conceivably, it may also influence outcome of psychopathology. This is a preliminary report in which we are proposing the notion of Identity Narrative (IdN), a set of implicit memories acquired throughout life and consolidated according to a gradient of emotional valence. IdN may constitute an implicit scaffolding for autobiographical memory. Identity Narrative Density (IND) is a score of emotional valence referring to life events that contribute to the construction of an IdN. We are proposing an equation of IND that provides a quantitative assessment of an individual's emotional life experiences and possible resilience in the face of trauma and adversities of life.

No. 140

Role of Social Support Networks in Patient Participation in Psychotherapy

Poster Presenter: Sona Shilpakar, M.D., M.P.H.
Co-Authors: Thomas Pawelzik, Samrachana Adhikari

SUMMARY:
Background: Patient participation in psychotherapy has been of interest to mental health practitioners since the early days of psychoanalysis. Though it has been argued that social networks affect help-seeking behaviors by, among others, transmitting attitudes and norms about seeking professional help, the hypothesis that social support networks in psychiatric patients' life are linked to participation in psychotherapy has hardly been explored. As part of a larger project aimed at better understanding the population attending Jamaica Hospital Medical Center's outpatient mental health clinic, we looked at a subset of the 2879 patients attending in the period from August to October, 2017 in order to determine whether the presence of a support network is associated with participation in psychotherapy. **Methods:** From the clinic's electronic medical record, we obtained information on 200 individuals aged 18 or above who were attending for the purpose of receiving an injection of long-acting intramuscular antipsychotic medication. These individuals represented 10.28% of 1946 adults on antipsychotic medication and 6.95% of our clinic's total adult patient population. For each of the 200 patients we recorded whether or not they had a support network (defined as family or friends with whom the patient has frequent positive interactions) and whether or not they participated in psychotherapy. Data were analyzed with a Chi

square test of association. **Results:** Average age of the 200 patients included in this study was 41.8 years (SD: 13.7 years; range: 19–79); 110 were male; 80 were African or African-American, 44 Asian, 17 Caucasian, 49 Hispanic (all races), while 10 identified as "other." Only 29 were married or living with a significant other, the rest being either single (144), separated or divorced (23), or widowed (4), yet 171 had a support network mainly consisting of family, close friends, and/or non-cohabitating significant others; 68 of the 171 (39.77%) were in psychotherapy. Of the remaining 29 patients, who lived alone and had no support network, only 5 (17.24%) participated in psychotherapy (χ^2=5.428; p<0.02). **Discussion:** Our results are compatible with the hypothesis that presence of a social support network is linked to participation in psychotherapy. Yet given that barely 40% of individuals with a social support system saw a psychotherapist, social support may well be only one of several factors that predicts whether a patient seeks professional help other than medication management. Certainly, the quality of support offered by the system plays a role: if the members of the network devalue the role of psychotherapy as part of the recovery process in patients with mental illness, the latter's motivation to participate is bound to flag. It may also be the case that the support network is able to benefit the patient to such a degree that he/she does not feel the need for outside help; yet this sheltering function can be precarious, as frequently happens when elderly caregivers of a schizophrenic adult die and leave the patient to his/her own devices.

No. 141

Structuring a Music Medicine Session in the Psychiatric Outpatient Setting

Poster Presenter: Charles Wisniewski, D.O.

SUMMARY:

Music as a therapeutic modality is not a new concept, however, we are still investigating how it can most effectively be used. Performance-based ("active") and listening-based ("passive") musical exposure can help facilitate communication and understanding of difficult emotions, especially as an adjunct to both medication and psychotherapy. Guided by current literature, I experimented in incorporating music into my sessions in the outpatient clinic. Observations indicated its effectiveness at decreasing the pressure and anxiety a patient has. Engagement in music is both entertaining and constructive and can be employed at home. The approach requires providers to best choose with whom to utilize music medicine, organize the room appropriately, initiate therapy, understand musical therapy techniques, and interpret/translate musical motifs and behaviors. Two cases, a 50 year old African American male with refractory Major Depressive Disorder and a 35 year old Caucasian male with history of anoxic brain injury, PTSD and social anxiety, gave consent to illustrate how themes that appear discomforting can present in an interaction with the keyboard. The cases also explore how music is used to promote language acquisition and allow reflection. Careful attention to the room setup is very important to the effectiveness of the therapy. Two keyboards—one for the therapist and one for the patient, are set up to face in the same direction. Planning a uniform agenda regarding the use of music allows for strengthening of therapeutic relationship, increased comfort in the use of the instrument to identify and work through difficult material and the development of musical rapport. As the patient progresses, interactions become more intricate and personal leading to increased use of contextual harmonic accompaniment and more profound assessment of the meaning behind the music. Prospective therapy sessions will aim to incorporate more biofeedback techniques and field microphone recordings to objectively assess anxiety/affect change and the effectiveness of music as an intervention. Music, in both passive and active forms, can be an excellent tool for providers who are proficient in it and are willing to augment traditional psychotherapy treatment approaches. It can assist in rapport building, stress reduction, communication, and help a patient understand maladaptive thoughts and behaviors in real time.

No. 142

Speech as an Unusual Presentation of Catatonia: A Case Report

Poster Presenter: Maria Abramov
Co-Author: Yassir Osama Mahgoub, M.D.

SUMMARY:

OBJECTIVE: Describe a non-classical presentation of catatonia in a patient whose verbalizations paradoxically signified catatonia, resulting in confusion about diagnosis and delay in treatment; clarify that mutism is not merely the absence of speech, rather it lies on a continuum; and highlight the need to focus on the content of speech as it may reflect other signs of catatonia. BACKGROUND: Catatonia is a neuropsychiatric disorder characterized by motor abnormalities. It occurs in mood, psychotic and medical disorders, with a prevalence of 7-14% of inpatient psychiatric admissions. More than 40 signs of catatonia have been described in the literature, many of which overlap. The DSM-V requires the presence of 3 out of a selected 12 signs for diagnosis. Mutism, one of the most prevalent signs, is defined as a "verbally unresponsive or minimally responsive" state. Contrary to popular belief, speech can be present in catatonia, and occasionally its content can reflect other signs of catatonia, such as negativism and withdrawal. METHODS: A systemic PubMed search using the key terms "Catatonia" and "Mutism", and data collection of this individual case CASE: A 46-year-old woman with a history of bipolar I disorder presented with depressed mood, aggression and paranoia after stopping treatment. Her home medications of Haloperidol 15mg and Lithium 900mg were restarted on admission. Due to initial symptomatic improvement, she was given Haloperidol Decanoate 150mg. She later became withdrawn, at times tearful, and refused to speak or communicate other than the occasional nod. Eventually she refused to eat or leave her bed, and this raised concerns for catatonia. The administration of 2mg of intramuscular Lorazepam was attempted, however she started screaming, cursing, flailing her arms, and asking to be left alone when approached. The diagnosis of catatonia was questioned as she was no longer immobile or mute, and Lorazepam was not given. Over the next few days she returned to her withdrawn state and ultimately defecated in her bed. Lorazepam was administered then. Within 30 minutes the patient began to converse, and within 2 hours, she ate, showered, ambulated and socialized. She was placed on a standing dose of Lorazepam with resolution of the previously described symptoms. Despite the presence of immobility, withdrawal, negativism and mutism, her increased speech and mobility upon the initial medication offer caused confusion about the diagnosis and hence delayed treatment. It was only later realized that her verbalizations and movement in response to this attempt reflected other signs of catatonia, namely negativism (refusal of both interaction and treatment) and withdrawal (asking to be left alone). CONCLUSION: • Mutism can entail partial responsiveness rather than the complete absence of speech. • In the context of catatonia, speech content can reflect other signs of catatonia such as withdrawal and negativism.

No. 143

Clozapine-Induced Myoclonus: A Case Report and Literature Review

Poster Presenter: Maria Abramov
Co-Author: Yassir Osama Mahgoub, M.D.

SUMMARY:

OBJECTIVES: Describe a case of myoclonic jerks in a patient treated with Clozapine and review the literature on Clozapine-induced myoclonus and other seizure related activity, increase awareness about myoclonus and other seizure-related activity following titration of Clozapine, and highlight treatment options BACKGROUND: Myoclonus is part of a variety of seizure related activity associated with Clozapine, including tonic-clonic seizures, electric shock-like sensations, drop attacks, twitching, etc. Tonic-clonic seizures are the most documeted types of seizures in relation to Clozapine treatment, with an incidence of 5 to 10%. Although Clozapine-induced myoclonus is less recognized than tonic-clonic seizure, many reports in the literature have shown that it may precede a full blown tonic-clonic seizure. It is therefore critical to initiate treatment upon detection of such symptoms. The incidence of myoclonus in a population treated with Clozapine is not well defined, however based on two studies with large sample sizes, it was shown to be 0.9 to 2.9%. The low incidence rate may reflect the difficulty of recognizing myoclonic activity as it can be mislabeled as extrapyramidal symptoms, and the unexplained falls may be attributed to hypotension or sedation associated with clozapine. METHODS: Systemic PubMed search using the key terms "Myoclonus", "Clozapine," and "Seizures," and a case summary of a recent patient who developed myoclonic jerks in

association with Clozapine titration. CASE: A 37 year old female with psychiatric history of schizophrenia, with no history of seizure disorder and no significant medical history, underwent several antipsychotic trials prior to the initiation of Clozapine, her only medication at the time. After titrating to a dose of 125 mg daily and 175 mg at bedtime with a blood level of 336 ng/mL, she experienced recurrent involuntary jerks of her lower extremities. She also reported an accompanying electric shock-like tingling sensation in her back and upper extremities, as well as a feeling of unsteadiness leading to incidents of near falls, a few of which were witnessed. No significant findings were elicited on neurological evaluation. Lab studies including CBC, BMP, LFTs, and ammonia level were within normal limits. She was started on Valproic acid 250 mg twice daily with improvement of symptoms. Upon further Clozapine titration, the myoclonus and its accompaying symptoms became more pronounced. In response, Valproic acid was increased to 500mg twice daily (at a level of 21.5 mcg/mL), with complete resolution of myoclonic activity. Conclusions • Myoclonus can occur with Clozapine and may precede an episode of tonic-clonic seizure • Symptoms appear to be dose dependent • Consider ruling out other causes of myoclonus such as metabolic derangement, infectious process or drug interactions • Valproic acid, Lamotrigine and Topiramate are options for treatment.

No. 144

Improving Use of Nicotine Replacement Therapy on Inpatient Psychiatric Unit With EMR Change: Development of a Quality Improvement Project

Poster Presenter: Christine LaGrotta, M.D.
Co-Authors: Awais Aftab, M.D., Alexandra Wang, M.D., Cheryl Chen, M.D., Samantha Latorre, M.D., Christine Marie Collins, M.D., Andrew Bishoy Mikhail, M.D.

SUMMARY:

It is recognized that psychiatry inpatient units have a high prevalence of tobacco using individuals, that nicotine withdrawal in this setting is often sub-optimally treated, and smokers resultantly experience greater agitation and irritability on inpatient units (Prochaska, et al. 2004). However, use of nicotine replacement in inpatient settings remains understudied. University Hospitals Cleveland Medical Center, a tertiary care affiliate of Case Western Reserve University School of Medicine, has a 34-bed smoking-free inpatient psychiatry unit with two wings. We conducted a quality improvement project by PGY3 psychiatry residents, to increase the number of patients who are initiated on adequately-dosed nicotine replacement therapy on admission to the inpatient psychiatric unit. We followed the commonly utilized PDSA (Plan, Do, Study, Act) framework for our QI project. The QI team consisted of psychiatry residents, attending advisors, unit nurse managers, pharmacy liaison and EMR liaison. We conducted a chart review of all psychiatric admissions on the unit during the 2-month period of August-September 2016 to determine the current practices regarding documentation of smoking status and prescription of NRT. Our chart review (N=187) revealed the following: Documentation of smoking status by the admitting resident was done in 97.8% of admissions; tobacco use was quantified in 61.9% of smokers; NRT was ordered within 6 hours of admission in 43.8% of smokers; when NRT was ordered, it was dosed appropriately in 63.4% of cases, and NRT was prescribed at the time of discharge in 27.1% of smokers. Identifying the room for improvement in quantification of tobacco use, timely prescription of NRT, and appropriate dosing of NRT, we discussed potential intervention for improving the quality of care. The QI team decided that making documentation of tobacco use mandatory in the admission note (such that the note cannot be signed if the documentation has not been entered) and linking it with a nicotine replacement order set with inbuilt NRT dose calculator would be the ideal intervention. Appropriate NRT dosages for the NRT calculator were reviewed and approved by the pharmacy liaison. A formal request for EMR changes in the admission note and order set was submitted and then reviewed by the Psychiatric Clinical Effectiveness Committee, Physician Committee and Prioritization Committee before EMR changes were implemented. EMR changes were implemented on May 2, 2017. Data regarding documentation of smoking status and prescription of NRT after the EMR change during the 2-month period of August-September 2017 is currently being collected. Analysis of results and improvement in quality

measures, along with details of the EMR changes, will be shared with the audience in the poster. Our quality improvement project using EMR changes significantly adds to the scarce literature, and suggests one way to meet Medicare standards for management of tobacc

No. 145
WITHDRAWN

No. 146
The Concepts of "Religiousness" and "Spirituality" in a Clinical Brazilian Sample: A Qualitative and Quantitative Study
Poster Presenter: Cristiane Schumann

SUMMARY:
Background: Despite the evidence regarding the impact of religiousness and spirituality on individuals' health, there is still no consensus about the definitions of religiousness and spirituality, especially in Brazil. Aim: to evaluate quantitatively and qualitatively these constructs for a Brazilian sample of inpatients and of their caregivers. Methods: the sample consisted of patients and caregivers from two general hospitals of Juiz de Fora - MG (a public and university one, and a private one). For the quantitative data, a socio-demographic questionnaire, the Brief Multidimensional Measure of Religiousness and Spirituality (BMMRS), and the Duke Religious Index(DUREL) were used. For the qualitative analyzes, a semi-structured questionnaire was used and the interviews were recorded. It was used SPSS software to tabulate data, the p value adopted was p ?0.05. The statistical tests Chi-square (categorical variables) and a non-parametric test (continuous variables) were used. The technique used to analyze the qualitative data was the content analysis of the structural and thematic type. Results: The sample consisted of 656 people, the majority of them were women, Caucasian, married, with High School degree, caregivers, and from the public hospital. The average age was 49.28 years for inpatients, and 44.7 years for caregivers. In the correlation between "being religious" and socio-demographic and religious variables, the Intrinsic Religiosity, and Non-Organizational Religiosity (DUREL) were statistically significant. Regarding "being spiritualized", religious affiliation, and, Non-Organizational Religiosity (DUREL), and Religious Coping (BMMRS) were statistically significant. In the intra-correlation between "being religious" and "being spiritual", the alpha coefficient was 0.483 (p> 0.001) indicating a moderate correlation. Qualitative data reflected confusion and insecurity regarding definitions of religiousness and spirituality. Spirituality was frequently associated to Spiritism, the third most popular religion in Brazil. Conclusions: Brazilians do not have a clear definition of religiousness and spirituality, they tend to assign a religious aspect to religiousness and to spirituality. Because of the radical of the words, spirituality and Spiritism seems to be confounded in Brazil.

No. 147
Delirium Pocket Reference: Tools for Residents Caring for Older Adults With Delirium
Poster Presenter: Patricia Serrano, M.D.

SUMMARY:
Introduction: Delirium is a common clinical syndrome characterized by acute fluctuation of attention and cognition. It is produced by a medical condition, substance intoxication or withdrawal, or exposure to a toxin, and it is often multifactorial. It is an independent marker for increased mortality and prolongs length of hospitalization. It increases the risk of complications and the rates of discharge to long-term care. Delirium can also accelerate the trajectory of cognitive decline in patients with Alzheimer's disease. It is commonly unrecognized and managed inappropriately, even though it has long-term, devastating consequences in the quality of life of those who suffer it. Methods: We developed a survey to obtain information on how comfortable trainee physicians are in assessing, documenting, treating and consulting psychiatry when caring for older adults with delirium. Participants are a convenient sample of internal medicine residents in different years of training in a community based hospital. After the survey a 45 minute lecture is given in which causes, diagnostic criteria, screening, clinical features and management are reviewed. Then a "Pocket Reference" with this information is provided. Hypothesis: A practical tool that can be easy to refer too when suspecting delirium can improve trainee physicians level of comfort when caring for older adults with delirium.

Results are pending due to the lecture being schedule for December 2017.

No. 148
A Multisystem Composite Biomarker as a Diagnostic Test in Bipolar Disorder
Poster Presenter: Klaus Munkholm

SUMMARY:
Background: Diagnosis and management of bipolar disorder (BD) are limited by the exclusive reliance on subjective information in the absence of available laboratory tests. We aimed to combine data from different molecular levels and tissues into a composite diagnostic- and state biomarker. **Methods:** Expression levels of 19 candidate genes in peripheral blood mononuclear cells, plasma levels of BDNF, NT-3, IL-6 and IL-18, whole blood leukocyte counts and urinary markers of oxidative damage to DNA and RNA were measured in 37 adult rapid cycling patients with BD in different affective states during a 6–12 month period and in 40 age- and gender matched healthy control individuals in a longitudinal, repeated measures design comprising a total of 140 samples. A composite biomarker was constructed using data driven variable selection. **Results:** The composite biomarker discriminated between patients with BD and healthy control individuals with an area under the receiver operating characteristic curve (AUC) of 0.81 and a sensitivity of 72% and specificity of 68% corresponding with a moderately accurate test. Discrimination between manic and depressive states had a moderate accuracy, with an AUC of 0.79 and a sensitivity of 88% and a specificity of 40%. **Conclusion:** The composite biomarker discriminated moderately well between patients with BD and healthy control individuals and also between depression and mania. Findings were limited by a small sample size. Combining individual biomarkers across tissues and molecular systems could be a promising avenue for research in biomarker models in BD.

No. 149
Glycogen Synthase Kinase-3B Activity and Cognitive Functioning in Patients With Bipolar I Disorder
Poster Presenter: Klaus Munkholm

SUMMARY:
Background: Cognitive deficits are common in patients with bipolar disorder (BD) in remission and contribute to reduced socio-occupational capacity. Preclinical evidence suggests that cognitive functioning may be associated with glycogen synthase kinase-3 (GSK-3) activity and that this activity is inhibited by lithium. GSK-3 may be a relevant treatment target for interventions tailored at cognitive disturbances in BD but the relation between GSK-3 activity, cognition and lithium treatment has never been investigated in humans and is thus unknown. We therefore investigated the possible association between GSK-3 activity and cognition and whether lithium treatment moderates this association in patients with BD. Methods: In a prospective 6-12 month follow-up study, GSK- 3β activity in peripheral blood mononuclear cells (PBMC) was measured concurrently with cognitive performance assessed using a comprehensive test battery in 27 patients with BD-I in early and sustained remission following a manic or mixed episode. Cognitive functioning was measured as four separate cognitive domain composite scores and a global cognition score based on recent recommendations. GSK-3β was measured in isolated PBMCs by Enzyme Immunometric Assay and the activity of GSK-3β was assessed directly as the level of serine-9-phosphorylated GSK-3& (pGSK-3β) and indirectly, as the ratio between pGSK-3β and the total content of GSK-3β in PBMCs (pGSK-3β / total GSK-3β). Results: The GSK- 3β activity, measured as phosphorylated GSK- 3β) and the GSK- 3β ratio (pGSK-3β /total GSK- 3β), was negatively associated with sustained attention ($p = 0.009$ and $p = 0.042$, respectively), but not with other cognitive domains or global cognition. A crossover interaction between lithium treatment and the GSK activity was observed, indicating that lower pGSK-3β levels ($p = 0.015$) and GSK ratio (0.010) were associated with better global cognition in lithium users whereas the opposite association was observed in non-lithium treated patients. Findings, however, were not statistically significant after Bonferroni correction. Conclusions: This preliminary study, for the first time exploring these relationships in humans, found indications that cognitive functioning may be associated with GSK-3 activity in PBMCs of patients with bipolar I disorder and that lithium treatment may modulate this relationship. Findings are limited

by a small sample size. Larger studies using similar extensive cognitive testing are needed to further assess the potential association between cognition and GSK-3 activity in peripheral blood. This study was supported by grants from The Mental Health Services of the Capital Region of Denmark, The Toyota Foundation, Augustinus Fonden, Overlaelig dr.med. Einar Geert-Jorgensen og hustru Ellen Gert-Jorgensens Forskningslegat, The A.P. Muller Foundation for the Advancement of Medical Science and Slagtermester Max Wurzner og hustru Inger Wurzners Mindelegat. The laboratory of Neuroscience (LIM27) is supported by the Associaccedil beneficente Alzira Denise Hertzog da Silva (ABADHS).

No. 150

Characteristics of Patients With Mood Disorders Taking Antipsychotics: Data From Depression and Bipolar Support Alliance Survey Respondents

Poster Presenter: Ingrid Deetz
Co-Authors: Michael Ganz, Surbhi Shah, Allen Doederlein, Denisse DePeralta, Chuck Yonan

SUMMARY:

Background: Given the increasing use of adjunctive antipsychotics for mood disorders (bipolar and depression) more real-world research is needed regarding potential unwanted effects of these drugs in patients with mood disorders. The Depression and Bipolar Support Alliance (DBSA) is a national, peer-directed and wellness-oriented organization that focuses on depression and bipolar disorder. From 19-Oct-2016 to 21-Nov-2016, the DBSA conducted a survey to gather information on the side effects of psychiatric medications in individuals with a mood disorder. One focus of this survey was tardive dyskinesia (TD), a potentially debilitating hyperkinetic movement disorder associated with prolonged exposure to antipsychotics. Data from respondents to the DBSA survey were analyzed to characterize their use of psychiatric medications. Methods: Individuals were invited to complete a survey through various DBSA channels (e.g., electronic newsletters, local chapters, social media and social media advertisements). The survey included questions concerning psychiatric diagnoses, TD diagnosis, and medication history. Analyses were based on the number of valid responses (non-missing responses) for each specific question. Responses to all survey questions were analyzed descriptively. Results: Most of the 2007 individuals who responded to at least 1 question reported having multiple psychiatric diagnoses, including bipolar disorder (69%), depression (60%), and/or anxiety (59%). The most commonly used drug classes, reported by 1847 respondents with current or prior exposure to psychiatric medications, were antidepressants (65%), mood stabilizers (62%), anxiolytics (53%), and antipsychotics (50%). Three-quarters of the 884 respondents who reported current and/or prior antipsychotic use had a lifetime exposure of >=1 year; 23% reported a lifetime exposure of >=10 years. Forty-nine respondents reported having received a diagnosis of TD from a physician. Compared with respondents without TD, those with TD were more likely to have bipolar disorder (90% vs. 69%) and be using, or have used, antipsychotics (100% vs. 49%), mood stabilizers (86% vs. 61%), antidepressants (78% vs. 64%), and anxiolytics (63% vs. 53%). In addition, 43% of the TD respondents had >=10 years of lifetime exposure to antipsychotics. Conclusion: Survey respondents had multiple psychiatric diagnoses and reported use of medications from multiple classes. Respondents with TD were more likely to have taken psychiatric medications and had longer lifetime exposure to antipsychotics than respondents without TD. These data add to the description of the heterogeneous nature of TD patients and demonstrate the need to assess for TD in all patients (including those with a mood disorder) taking antipsychotic medications. Additional information on medical and treatment history of survey respondents will be presented at the meeting. Survey development (but not content) supported by Neurocrine Biosciences.

No. 151

Results of a Depression and Bipolar Support Alliance Survey: Focused Analysis of Tardive Dyskinesia in Patients With Mood Disorders

Poster Presenter: Ingrid Deetz
Lead Author: Michael Ganz
Co-Authors: Surbhi Shah, Allen Doederlein, Denisse DePeralta, Chuck Yonan

SUMMARY:

Background: The Depression and Bipolar Support

Alliance (DBSA) is a national, peer-directed and wellness-oriented organization that focuses on depression and bipolar disorder. From 19-Oct-2016 to 21-Nov-2016, the DBSA conducted a survey to gather information on antipsychotic side effects in patients with mood disorders, with a special emphasis on tardive dyskinesia (TD). TD is a potentially debilitating hyperkinetic movement disorder associated with prolonged use of antipsychotics and often persists even after antipsychotic treatment is stopped. Data from the DBSA survey were analyzed to characterize the symptoms of TD and the levels of distress associated with TD. Methods: Individuals were invited to complete a survey through various DBSA channels (e.g., electronic newsletters, local chapters, social media and social media advertisements). The survey included questions regarding psychiatric diagnoses, TD diagnosis, time spent managing health issues, side effects from psychiatric medications, and distress associated with medication side effects. Analyses were based on the number of valid responses (non-missing responses) for each specific question. Responses to all survey questions were analyzed descriptively. Results: Most of the 2007 individuals who responded had multiple psychiatric diagnoses, with bipolar disorder (69%), depression (60%), and anxiety (59%) being the most commonly reported diagnoses. Forty-nine individuals reported having received a TD diagnosis, primarily from a psychiatrist (75%). Overall, akathisia was the antipsychotic side effect most commonly reported (52%) by 859 respondents; other movement-related side effects were reported by 11% (rocking/jerking/flexing/thrusting of trunk/hips) to 22% (speech interference) of respondents. Among the 49 respondents who received a confirmed TD diagnosis, side effects that led to the seeking of medical help included: repeated movements of tongue/jaw/lips (55%), akathisia (43%), writhing/twisting/dancing movements in fingers/toes (30%), rocking/jerking/flexing/thrusting of trunk/hips (27%), and difficulty swallowing or speech interference (27%). At least 50% of TD respondents reported being “extremely distressed” by their abnormal trunk/hip movements (83% [10/12]), abnormal tongue/jaw/lip movements (58% [15/26]), and/or speech interference (50% [7/14]). The majority of the 49 TD respondents reported discussing their side effects with their psychiatrist (86%), family member (61%), therapist (51%), and/or primary care physician (51%). Conclusion: In these analyses, TD is shown to be prevalent and distressing in patients with mood disorders (bipolar, major depression, anxiety). These data highlight the need to assess for TD in all patients (including those with a mood disorder) taking antipsychotic medications. Further analysis of symptom burden is needed. Survey development (but not content) supported by Neurocrine Biosciences, Inc.

No. 152

A Prospective Real-World Dyskinesia Screening Study and Registry in Patients Taking Antipsychotic Agents (RE-KINECT): Quality of Life Results

Poster Presenter: Stanley N. Caroff, M.D.
Co-Authors: William Lenderking, Karen Yeomans, Huda Shalhoub, Veronique Page, Chuck Yonan

SUMMARY:

Background: Tardive dyskinesia (TD) is a persistent movement disorder associated with prolonged exposure to antipsychotics. TD can have a negative impact on the social, emotional, and physical wellbeing of patients and their caregivers. Additional research is needed to further understand the impact of TD on patient quality of life (QoL). RE-KINECT (NCT03062033) is an ongoing registry study that investigates the effects of TD on a real-world population of patients taking antipsychotic medications. Methods: RE-KINECT is designed to enroll patients from up to 70 US psychiatric practices. Adults with >=3 months of lifetime exposure to antipsychotic(s) and >=1 psychiatric disorder(s) are eligible for screening, which involves a clinician looking for abnormal involuntary movements in general body regions (head/face, neck/trunk, upper/lower limbs) and assessment of possible TD. Based on clinician evaluation, participants are assigned to Cohort 1 (without visible signs of involuntary movements) or Cohort 2 (with visible signs and clinician assessment of possible TD). Demographics, psychiatric history, and medication history were captured as part of a 12-month retrospective chart review. Health-related QoL was evaluated in Cohorts 1 and 2 using the EuroQoL 5 Dimensions (EQ-5D-5L) questionnaire, which includes 5 domains that are each scored on a scale

of 1 (no problems) to 5 (extreme problems). Results: Of 236 currently enrolled patients, 67 (28%) have clinician-confirmed possible TD (Cohort 2). Interim baseline characteristics are as follows (Cohort 1, Cohort 2): mean age, years [SD] (47.2 [14.1], 56.6 [12.0]); male (39%, 39%); full-time employment (22%, 13%); mean lifetime exposure to antipsychotic(s), years (7.2 [8.2], 15.1 [14.0]); schizophrenia/schizoaffective disorder (21%, 42%); bipolar disorder (54%, 49%); major depressive disorder (37%, 34%); anxiety disorder (34%, 54%). Except for anxiety/depression, mean EQ-5D-5L domain scores at baseline were higher (worse QoL) in patients with possible TD (Cohort 1, Cohort 2): mobility (1.5 [0.9], 1.8 [0.9), self-care (1.2 [0.6], 1.6 [1.0]), usual activities (1.7 [1.0], 1.9 [1.1]), pain/discomfort (2.0 [1.1], 2.4 [1.2]), and anxiety/depression (2.5 [1.2], 2.5 [1.2]). Conclusion: Current interim results from this novel registry study suggest that TD may contribute to functional impairment and may be associated with other attributes (older age, schizophrenia/schizoaffective disorder) that negatively affect QoL. The meeting presentation will include results from the complete patient sample and multivariate analyses exploring factors that may affect QoL. Supported by Neurocrine Biosciences, Inc.

No. 153

Characteristics of Patients With Tardive Dyskinesia: Baseline Results From the KINECT 4 Valbenazine Study

Poster Presenter: Khodayar Farahmand
Co-Authors: Stephen R. Marder, M.D., Caroline Tanner, Cherian Verghese, M.D., Josh Burke, Roland Jimenez, Scott Siegert, Dao Thai-Cuarto

SUMMARY:

Background: Tardive dyskinesia (TD) is associated with prolonged exposure to dopamine receptor blocking agents (e.g., antipsychotics), and risk factors for developing TD include mood disorder diagnosis and older age. Valbenazine (INGREZZA; VBZ), a highly selective vesicular monoamine transporter 2 (VMAT2) inhibitor, is approved for the treatment of TD in adults. Baseline data from the KINECT 4 study (NCT02405091) of VBZ (40-80 mg) in TD patients were analyzed to characterize this study population. Methods: KINECT 4 included open-label treatment (48 weeks) followed by washout (4 weeks). Entry requirements included: moderate or severe TD, based on clinical diagnosis (severity qualitatively assessed at screening by a blinded, external video reviewer); DSM diagnosis of schizophrenia, schizoaffective disorder, or mood disorder; and psychiatric stability (Brief Psychiatric Rating Scale total score <50). Stable regimens of concomitant psychiatric medications were allowed. All dosing was initiated at 40 mg, with escalation to 80 mg at Week 4 if participants had a Clinical Global Impression of Change-TD score of >=3 (“minimally improved” to “very much worse”) and tolerated the 40-mg dose. A reduction to 40 mg was allowed if 80 mg was not tolerated (80/40 mg group). Baseline data were analyzed descriptively in the safety population and included: demographics, age at TD diagnosis, psychiatric diagnosis, concomitant medication use, lifetime suicidal ideation or behavior, and Abnormal Involuntary Movement Scale (AIMS) total score (sum of items 1-7). Results: Of 167 participants who entered the study, 163 were included in the safety population (40 mg, n=45; 80 mg, n=107; 80/40 mg [dose reduction], n=11). Participants were 53% male, 68% white, with a mean age of 57.4 years, and mean age at TD diagnosis of 48.4 years. Participants were diagnosed with schizophrenia or schizoaffective disorder (73%) or a mood disorder (27%). Most participants (99%) received >=1 concomitant medication, including antipsychotics (88%), antidepressants (65%), anxiolytics (34%), and anticholinergics (27%). Almost half of participants (42%) had a lifetime history of suicidal ideation or behavior. The mean baseline AIMS total score (by on-site investigators) was 14.6. Conclusion: Characteristics of participants in this long-term, open-label study were similar to those in other TD clinical trials. Participants in this trial also had complex comorbid medical conditions and concomitant polypharmacy, which will be presented at the meeting. Supported by Neurocrine Biosciences, Inc.

No. 154

Dream Study: Updated Analysis Characterizing Subjects With Recent-Onset Schizophrenia or Schizophreniform Disorder

Poster Presenter: Brianne Brown
Co-Authors: Ibrahim Turkoz, Yong Yue, Larry D.

Alphs, M.D., Ph.D.

SUMMARY:
Background: The early, effective treatment of schizophrenia may slow disease progression and improve outcomes, and targeting its cognitive deficits may prevent chronic disability. The Disease Recovery Evaluation and Modification (DREaM) trial (NCT02431702) is a doubly randomized, matched-control, open-label study comparing the effectiveness of treatment with paliperidone palmitate once-monthly or once-every-3-months long-acting injection versus oral antipsychotics in subjects with recent-onset schizophrenia or schizophreniform disorder. This analysis characterized baseline demographics and clinical characteristics of enrollees in DREaM and compared similar data from the Recovery After an Initial Schizophrenia Episode (RAISE) study, a multisite, randomized controlled trial in subjects with first-episode psychosis receiving treatment at US community mental health centers. Methods: DREaM study subjects, who were part of academic and community-based clinics, were aged 18-35 years with a DSM-5 diagnosis of schizophrenia or schizophreniform disorder and had a first psychotic episode within 24 months of screening. RAISE enrolled subjects aged 15-40 years with a DSM-IV diagnosis of schizophrenia, schizoaffective disorder, and schizophreniform disorder with a single episode of psychosis. Study comparisons for available data points were evaluated using chi-square test for categorical data and t-tests for continuous variables. Additional characteristics for DREaM were evaluated using descriptive statistics. Results: As of August 2017, 121 subjects were enrolled in DREaM and 404 subjects were available from RAISE. Mean±SD ages for the DREaM and RAISE studies were comparable (22.8±4.3 vs 23.1±5.1 years; P=0.522); the proportion of males was similar (79% vs 73%; P=0.113). Mean±SD baseline CGI-S score was higher in DREaM vs RAISE (4.3±1.0 vs 4.1±0.8; P=0.006), and more patients in DREaM lived with family/friends compared with those in RAISE (90% vs 71%; P<0.001). The majority of DREaM subjects had a diagnosis of schizophrenia (80%) and were enrolled 13±7.4 months after their first psychotic episode. Mean±SD number of psychiatric hospitalizations were 1.2±1.2. Histories of antipsychotic exposure, categorized as <6 months, 6-12 months, and >12 months, are 47%, 17%, and 24%, respectively. Screening mean±SD MATRICS Consensus Cognitive Battery score is 26.4±13.6 and Personal and Social Performance scale score is 50.7±14.3 (range: 5-80). The Clinician-Rated Dimensions of Psychosis Symptom Severity scale showed that symptoms were most severe in the domains of “delusions” and “negative symptoms.” Data on the fully enrolled study population will be available at the time of presentation. Conclusions: With few exceptions, the baseline demographics and characteristics of subjects in DREaM appear similar to those reported in the RAISE study and are representative of recently diagnosed patients with schizophrenia. Support: Janssen Scientific Affairs, LLC

No. 155
Characteristics of Caregivers and Patients With Recent-Onset Schizophrenia: Analysis of the Complete Baseline Data From the FIRST Study
Poster Presenter: Branislav Mancevski, M.D.
Co-Authors: Jagadish Gogate, Katie Ashcroft, Kristy Tardieu, Edward Kim

SUMMARY:
Background: Approximately 8.4 million caregivers in the United States provide support to adults with serious mental illness. Recurrent negative symptomatology in patients with serious mental illness causes significant caregiver burden, which is a barrier to effective caregiving. We analyzed demographic and baseline characteristics of caregivers and patients in their care recently diagnosed with schizophrenia, schizophreniform, or schizoaffective disorders and enrolled in the Family Intervention in Recent-Onset Schizophrenia (FIRST) study (NCT02600741). Methods: FIRST is a 12-month, ongoing, open-label, phase 4, randomized trial designed to evaluate the effects of caregiver-directed psychosocial intervention (CDPI) on the outcomes of patients in their care. The study enrolled 150 patient–caregiver pairs. The caregivers were randomized to receive CDPI or usual caregiver support. The patient assessments include an evaluation of symptom severity (Clinical Global Impression–Severity [CGI-S] scale score) and illness self-management and recovery (IMR scale score). Caregiver assessments include an evaluation of

caregiver burden (Involvement Evaluation Questionnaire [IEQ] score) and general health (12-item Short Form Health Survey). For the analysis of the baseline data, descriptive statistics were used to summarize demographic and baseline characteristics. The Pearson correlation coefficient was used to assess the relationship between caregiver burden and patient illness severity and the relationship between caregiver burden and caregiver overall mental and physical components at baseline. Regression analyses were performed to obtain mean and prediction intervals. Results: In an interim review of the baseline data, patients (mean age: 26) were predominantly male and living with family or friends, while their caregivers (mean age: 52) were predominately female. There was a moderate and significant correlation between the caregivers IEQ total score and patients' CGI-S score at baseline (r=0.273; P=0.0151) and a significant negative correlation between caregivers' IEQ total scores and patients' IMR scores at baseline (r=–0.290; P=0.0091). These data suggest that lower caregiver burden was associated with a patient's higher functional status. In the analysis of the complete baseline dataset, we expect to report similar correlation trends between caregiver burden and severity of patient illness. Conclusion: Demographic and baseline data have shown that severity of patient illness and poor illness management are among the factors influencing greater caregiver burden. Support: Janssen Scientific Affairs, LLC

No. 156

Effectiveness of Coordinated Specialty Care for Early Psychosis: Systematic Review, Meta-Analysis, and Metaregression-Analysis

Poster Presenter: Britta Galling

SUMMARY:

Introduction: The value of early intervention in psychosis and allocation of public resources has long been debated1–7 since outcomes in people with schizophrenia-spectrum disorders have remained suboptimal8: Schizophrenia is among the ten most debilitating disorders in the US9, being associated with high disability10, and enormous personal and societal cost. Methods: This systematic review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) standard. Systematic literature search of PubMed/PsycInfo/Embase/clinicaltrials.gov without language restrictions from database inception until 06/06/2017 for randomized trials comparing coordinated specialized care (CSC) versus Treatment as Usual (TAU) in ?20 patients with a study-defined diagnosis of a first psychotic episode or early-phase schizophrenia-spectrum disorder. Random effects meta-analysis, sensitivity analysis and meta-regression analysis for co-primary outcomes (treatment discontinuation; ?1 psychiatric hospitalization) and key secondary outcomes (total symptom improvement; functioning; vocational rehabilitation). CSC and TAU were compared at study endpoint and by specific time period, i.e., short-term (6 months), medium-term (9-12 months), and longer-term (18-24 months). Maintenance effect was analyzed using follow-up data after CSC ended. Results: Meta-analyzing 10 studies (n=2,176; age=27.5±4.6 (range=16-65) years; male=62.3%; trial duration=16.2±7.4 (range=9-24) months) CSC was superior to UC/MC regarding all-cause discontinuation (studies=10, n=2173, RR=0.70, 95% confidence interval (CI)=0.61-0.80, p<0.001), ?1 hospitalization (studies=10, n=2105, RR=0.74, 95%CI=0.61-0.90, p=0.003; NNH=10.1, 95%CI=6.4-23.9), total symptom severity (studies=8, n=1179, SMD=-0.32, 95%CI=-0.47, -0.17, p<0.001), positive symptoms (studies=10, n=1532, SMD=-0.22, 95%CI=-0.32, -0.13, p<0.001), negative symptoms (studies=10, n=1432, SMD=-0.28, 95%CI=-0.42, -0.14, p<0.001), general symptoms (studies=8, n=1118, SMD=-0.30, 95%CI=-0.47, -0.13, p=0.001), depressive symptoms (studies=5, n=874, SMD=-0.19, 95%CI=-0.35, -0.03, p=0.017), functioning (studies=7, n=1005, SMD=0.21, 95%CI=0.09-0.34, p=0.001), vocational rehabilitation (studies=6, n=1743, RR=1.13, 95%CI=1.03-1.24, p=0.012), and quality of life (studies=4, n=505, SMD=0.23, 95%CI=0.004-0.456, p=0.046). Superiority of CSC was evident at all time-points (short-term, medium-term, longer-term). Conclusions: There is clear evidence that CSC improves clinical and functional outcomes in young patients with psychosis. However, more follow-up studies are needed to evaluate the optimal treatment duration and the sustained benefit of CSC. Analysis on the cost-effectiveness (direct and

indirect cost) are needed to allow for the implementation in public health care settings.

No. 157

Adherence, Resource Use, and Medicaid Spending in Schizophrenia Patients Switching From Once-Monthly to Once-Every-Three-Month Paliperidone Palmitate

Poster Presenter: Antoine C. El Khoury
Lead Author: Bruno Emond
Co-Authors: Marie-Hélène Lafeuille, Kruti Joshi, Dominic Pilon, Neeta Tandon, Hela Romdhani, Patrick Lefebvre

SUMMARY:

Background: Real-world evidence is emerging on the use of once-every-three-month paliperidone palmitate (PP3M). However, the effect on adherence, health care resource utilization (HRU), and spending associated with switching to PP3M after being adequately treated with once-monthly paliperidone palmitate (PP1M) remains unknown. **Objective:** To describe and compare adherence to antipsychotics (APs), HRU, and Medicaid spending pre- and post-PP3M initiation in patients with schizophrenia. **Methods:** Medicaid data from IA, KS, and MO (01/2014–03/2017) was used to identify adults with ≥1 PP3M claim (first claim is the index date), ≥12 months of pre-index enrollment (baseline), and ≥2 schizophrenia diagnoses (excluding schizoaffective disorder) with ≥1 of them during baseline. Patients also followed the recommended PP1M dosage and administration: no gap andgt;45 days in PP1M coverage 4 months pre-index, same strength for the last 2 PP1M dosages pre-index, and adequate PP1M to PP3M dosage conversion, as per prescribing guidelines. Adherence to APs was defined as the proportion of patients with a proportion of days covered (PDC) ≥0.80. Generalized estimating equation (GEE) models with binomial, Poisson, and normal distributions were used to assess trends in adherence to APs, all-cause HRU, and costs over the 4 quarters pre-index, respectively as well as monthly HRU and costs comparisons between the 6 months pre- and 12 months post-index. Pre- and post-index 12-month adherence to APs was compared among patients with ≥12 months post-index. P-values were estimated using 500 bootstrap samples. **Results:** In total, 324 patients followed the recommended PP1M-PP3M transition (mean age: 41.4 years; 63.9% males). In baseline quarters closer to PP3M initiation, adherence to APs increased from 66.8% to 84.6% (pandlt;0.01), mean monthly number of emergency room visits decreased from 0.10 to 0.07 (p=0.04), and mean monthly medical costs numerically decreased from $1,950 to $1,432 (p=0.08), mostly driven by a decrease in inpatient costs (from $469 to $232; p=0.02), while pharmacy costs increased (from $1,329 to $1,725; pandlt;0.01), resulting in similar total costs (from $3,279 to $3,157; p=0.89). For the subgroup of patients with ≥12 months of follow-up (N=151), adherence to APs remained similar in the 12 months pre- and post-index (66.2% vs 70.2%; odds ratio=1.20; p=0.38). Compared to the 6 months pre-index, post-index total ($3,456 vs $3,371; p=0.70), pharmacy ($1,870 vs $1,805; p=0.30), and medical costs ($1,586 vs $1,565; p=0.90) remained stable, while there was a decrease in the mean monthly number of one-day mental institute visits (1.71 vs 1.51; pandlt;0.01) and associated costs ($260 vs $232, p=0.01). Other HRU remained stable. **Conclusion:** Adherence to APs was similar pre- and post-PP3M initiation. This was also the case for costs and HRU, suggesting that PP3M is a cost-neutral option for patients adequately treated with PP1M with the added flexibility of once every three months dosing.

No. 158

Assessing Experiences, Attitudes, and Perceptions Associated With Treatment-Resistant Schizophrenia (TRS): Caregiver Focus Groups

Poster Presenter: Cecilia Brain, M.D., Ph.D.
Co-Authors: Steven Kymes, Ph.D., Dana DiBenedetti, Ph.D., Anne-Marie Kelnaes, M.A., Thomas Brevig, M.D., Ph.D., Dawn Velligan, Ph.D.

SUMMARY:

Background: Treatment-resistant schizophrenia (TRS) is among the most disabling psychiatric disorders with the greatest burden, impairment in community functioning, and poor psychosocial adjustment. TRS, clinically defined as failure to respond to two trials of antipsychotics (APs) of adequate dose and duration, affects about one-third of persons with schizophrenia. The objective of this qualitative study was to investigate the impact of

TRS on caregivers of people with TRS and their perception of available treatments. Method: Eight focus groups, with caregivers of persons with TRS currently treated with APs were conducted in five US locations. Non-professional, adult caregivers providing care at least 20 hours/week were recruited through 5 qualitative research facilities. TRS was operationalized as caregiver report of failure of >2 APs (adequate dose and duration and at least one being an atypical) of at least 6 weeks duration and moderate or severe residual positive symptoms of schizophrenia despite medication adherence. Results: Twenty-seven caregivers reported an average of nearly 40 hours/week providing direct care, such as coordinating physician/therapist appointments (93%); managing medications (85%); and providing emotional and social support (74%). In addition, caregivers reported being "on-call" an average of nearly 100 hours/week, and more than 40% being available "24/7". Being "on-call" and providing continuous emotional support (e.g., constant reassurance especially in relation to positive symptoms) was more challenging to caregivers than providing direct care, and significantly impacted their work status, social life and mental health. The most commonly reported residual symptoms included auditory hallucinations (89%); agitation, irritability, and hostility (81%); suspiciousness (78%); incoherent thinking/speech (74%) and cognitive impairment (74%). Seventy percent of caregivers ranked suspiciousness/persecution as the most challenging symptom, as it significantly restricted the caregiver's social interactions, ability to live "normally," and their ability to reason with/calm down the person with TRS. More than half (56%) of the caregivers provided financial assistance and/or managed the finances for the individual with TRS; and 17 caregivers reported that caregiving negatively impacted their own physical health. Residual psychotic symptoms caused significant perceived burden, feelings of being overwhelmed and having no relief, and substantial negative impacts on the caregivers' emotional and physical health. Conclusion: This study demonstrates the significant clinical, humanistic, economic, and societal impacts of TRS on caregivers. The results underscore the great burden of TRS for caregivers and the importance of developing new treatments for persons not responding to available APs.

No. 159

Inflammatory Markers and Psychotic Symptom Severity in Patients With Recent Synthetic Cannabis and Natural Cannabis Use

Poster Presenter: Claire Mann
Co-Authors: Sharron Spriggs, M.A., Anahita Bassirnia, M.D., Yasmin Hurd, Ph.D.

SUMMARY:
BACKGROUND The deteriorating course of chronic psychotic disorders suggests neurodegeneration, possibly due to inflammation within the CNS[1, 2]. Genetic analyses, including the 108 schizophrenia-associated gene loci study[3], brain tissue analyses[4], and epidemiological studies[5] point to the immune system's role in psychotic disorders. Peripheral and CSF cytokines are elevated in acute psychotic episodes, and some cytokines correlate with symptom severity[6] and decrease with remission [7]. Individuals with chronic psychotic disorders have a three-fold increased odds ratio of frequent cannabis (marijuana; MJ) use[8], and MJ itself increases the risk of psychosis and psychotic disorders[9, 10]. However, given MJ's anti-inflammatory properties, some inflammatory markers, such as IL-6, may be decreased by MJ use[11]. Further, a recent study reports that the increased IL-6 levels seen in acutely psychotic patients may be attenuated by MJ use[12]. Though synthetic cannabinoids (SCs) are full cannabinoid receptor agonists and are strongly associated with psychosis, their relationship with inflammation has not been studied. The current study aims to investigate inflammatory markers among psychotic inpatients with recent MJ and SC use. We hypothesize that non-cannabinoid (NC) using patients will have the highest cytokine levels, and that SC users will have the lowest, with MJ users in between. Furthermore, we hypothesize that, within each group, the degree of inflammatory response will correlate with psychosis severity. METHODS This is an ongoing cross-sectional study of psychotic patients admitted to an inpatient psychiatric unit at Mount Sinai Beth Israel hospital. Psychiatric evaluation includes the Positive and Negative Syndrome Scale (PANSS)[13] for severity of psychosis

and a Drug History Questionnaire (DHQ)[14] for substance use, which is confirmed with toxicology testing. Serum samples are tested for inflammatory markers, including IL-2, IL-6, IL-8, and IL-10. Inflammatory markers will be investigated as predictors of psychosis severity in patients with recent MJ use, SC use, and in NC patients with linear regression models controlling for potential confounding factors. RESULTS/DISCUSSION Currently, 70 patients (20 female, age = 35.2 ± 11.2 years) have been enrolled. Toxicology reporting has identified 28 MJ users and 5 SC users. The total PANSS scores by group are 86.8 (NC), 84.4 (MJ), and 91.2 (SC); there are no significant between-group differences, nor for negative, positive, or general symptom subscales. It is predicted that final data will include 100 participants: 40 MJ, 7 SC. Results will be presented for regression models exploring the relationship between cannabinoid use and inflammatory markers. These results will inform the ongoing exploration between inflammation, cannabinoids, and psychotic disorders and will be the first report on possible inflammatory effects of SC.

No. 160

CSC OnDemand: A Novel Learning Package for Coordinated Specialty Care Teams Serving Patients With First-Episode Psychosis

Poster Presenter: Jeffrey Olivet, M.A.
Co-Authors: Mary F. Brunette, M.D., Catriona Wilkey, Kathleen Ferreira, Deborah Medoff, Ilana R. Nossel, M.D., Alexander Shulman, Lisa Dixon, M.D.

SUMMARY:
Background: Schizophrenia is a potentially devastating chronic illness that typically begins in adolescence or young adulthood. Early intervention provided by coordinated specialty care (CSC) teams can improve outcomes and potentially change the course of the illness. For example, the National Institute of Mental Health (NIMH) Recovery After an Initial Schizophrenia Episode (RAISE) projects demonstrated that multi-element, multi-disciplinary interventions improved outcomes in occupational and social functioning, symptoms, and quality of life. As widespread dissemination of CSC programs begins, a growing workforce needs training in evidence-based CSC practices to deliver services to individuals with early psychosis. Intervention Development: Through a Fast-track Small Business Innovation Research (SBIR) grant from NIMH, the Center for Social Innovation (C4) partnered with expert faculty to develop and evaluate CSC OnDemand: An Innovative Online Learning Platform for Implementing Coordinated Specialty Care. The team developed a novel training and implementation program that supports CSC teams by providing basic knowledge and skills training, role-specific information, peer-based learning, and ongoing access to resources and materials. Using C4's Omega Courseware, the interactive package integrates text, videos, audio clips, and links to external resources. In addition to independent use of on-line materials, participants interface with expert faculty in live video learning sessions with case discussions that deepen team learning and development. Phase I Pilot Study Methods: We tested the CSC OnDemand prototype, assessing feasibility, acceptability, and preliminary effectiveness among three teams of providers serving individuals with first episode psychosis. A quantitative survey administered pre- and post-intervention assessed knowledge acquisition (33 items) and a mixed-methods approach assessed feasibility and acceptability of the tool, including 24 survey items on satisfaction, ease of use, and system usability, ratings of each program component, and potential barriers to using the program. Phase I Pilot Study Results: Results showed high feasibility with 100% of participants using the tool and joining the live sessions, and 75% using the tool for ?4 hours. Participants reported high satisfaction (mean 3.4±36, possible range 1-4) and ease of use (mean 4.9±.14, possible range 1-5), and early application of skills to practice. Participants' knowledge of CSC and first episode psychosis improved (19% relative increase in mean score, t = 4.7, df=15, p< .001). In terms of program features, participants rated the live sessions and embedded videos highest, and they rated the reading and slides lowest. Conclusions: CSC OnDemand is a promising learning tool for providers and agencies serving individuals with early psychosis. These findings support further study of the program.

No. 161

Is Metabolic Screening in Difficult to Engage Outpatients Feasible?

Poster Presenter: Dan Cohen

SUMMARY:
All outpatients, irrespective of their psychiatric diagnosis, were asked to participate in yearly metabolic screening.A substantially, if not alarming, reduced life expectancy is a constant finding in patients with severe mental illness. The reduction found in a US study varied between 15-32 years. A recent replication in 1,1 million Medicaid patients with schizophrenia, the mean number of premature death was 28 years. Cardiovascular disease is the most important contributor to the reduction of life-expectancy. Some risk factors of cardiovascular disease are considered to be modifiable, although well-designed studies have so far been unable to obtain the desired improvement. We decided for metabolic screening in all outpatients with severe mental disorder, who received ACT-care. Methods A team of 3 psychiatric nurses was formed. After being trained in the metabolic syndrome and the screening methods, the interpretation of the laboratory results and measurement outcomes, they were stationed for 2-3 months in one of the 12 ACT-teams. All outpatients, irrespective of their psychiatric diagnosis, were asked to participate in yearly metabolic screening. Results Participation. Out of 2035 eligible patients, a total of 881 (43.3%) were screened in the previous 2 years and 1177 (57.8%) in the previous 5 years. The sex of the patients did not affect (non-)participation. Data on smoking were available for 1123 patients. A total 419 (56.6%) patients were smokers. Smoking prevalence differed per sex: 419 (61.8%) of the male patients were smokers and 217 (48.8%) of the female patients. Obesity was present in 27.2% of the study population: in 159 (23.3%) of the male patients and in 148 (33%) of the female patients. The prevalence of the metabolic syndrome (MS). Compared with the age-matched general population, the prevalence of the MS in the study population aged 30-70 years was, with the exception of 60-69 year old female patients, increased in both sexes in all age-cohorts. For both sexes the increase was greatest in the age cohorts 30-39 years and 40-49 years. ? Conclusion Even with maximal effort, less than 60% of the outpatients with SMI participated in metabolic screening within a 5-year time frame. With a prevalence of 56.6%, smoking was less prevalent than commonly assumed. The prevalence of metabolic syndrome was in both male and female patients most markedly increased in the age group under 50 year. For both sexes the increase was greatest in the age cohorts 30-39 years and 40-49 years. In 30-39 year old males, MS was present in 41.4% (study population) compared to 21.1% (general population) resp. 41.3% and 28.9% in 40-49 year old male patients. In female patients the prevalences were 30.6% (study population) compared to 9.5% (general population) resp. 32.7% and 17% in 40-49 year old female patients.

No. 162

Efficacy and Tolerability of the Three-Month Formulation of Paliperidone Palmitate in First-Episode Schizophrenia Patients

Poster Presenter: Daniela Petric, M.D., Ph.D.
Co-Authors: Valentino Racki, Nadija Gaco, Mirjana Graovac, Ana Kastelan

SUMMARY:
Introduction: Treating patients with first-episode schizophrenia is a challenge. Such patients have much to gain from controlled pharmacotherapy and even more to lose with a possible relapse. Treating patients with long-acting injectable antipsychotics avoids the issue of non-compliance, the biggest risk factor for relapse, while also improving the quality of life. Receiving a drug only four times a year can provide greater flexibility and convenience to our patients. Aim of the paper is to assess the therapeutic efficacy and tolerability of the three-month formulation of paliperidone palmitate long-acting injectable antipsychotic in first-episode schizophrenia patients. Methods: The research included 12 patients aged 19 to 24 years who were diagnosed in accordance with the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. Patients were assessed four times over one year (after each drug application) using the following clinical scales: Positive and Negative Syndrome Scale, Clinical Global Impression – Severity and Improvement Scale, Personal and Social Performance Scale. Primary safety measures included incidence of adverse events. Results: All treated patients achieved remission. There was a statistically significant improvement in measured scales in all patients. There were no side-effects

reported during the study period, with no relapse or new hospitalizations. Conclusion: The three-month formulation of paliperidone palmitate has proven to be effective and safe in our study, and has great potential to improve patient quality of life as well.

No. 163

Folie à Deux in a Mother-Daughter Pair on a Cross-Country Road Trip

Poster Presenter: Stephanie Welsh
Co-Author: Nita V. Bhatt, M.D., M.P.H.

SUMMARY:

Ms. S., a 19-year-old Caucasian female with no past psychiatric history presented to the psychiatric hospital with acute psychosis with predominant persecutory delusions. The patient originally presented to a medical emergency department with her mother, who was requesting medications for chronic back pain. Both mother and daughter were noted by the emergency staff to have disheveled and malnourished appearance, having lived in their car for several weeks on a cross-country road trip with an undetermined destination. The pair stated that they were fleeing members of a child pornography ring who were threatening to kill them. When separated, Ms. S. expressed other delusions of her father removing her uterus in his laboratory and murdering her brother. The patient was admitted to the psychiatric hospital in a separate unit from her mother, where she expressed delusions of bizarre treatment in the emergency department. Physical examination and collateral information from the patient's brothers confirmed that the patient's delusions were false, except for the existence of a neighbor who was being investigated for child pornography. The patient was diagnosed with unspecified schizophrenia spectrum and other psychotic disorder, and the delusions quickly resolved over the course of several days with Risperidone and separation from her mother. This case study demonstrates the importance of recognizing shared psychotic disorder, though not currently included in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), as the disorder quickly improves with separation of the affected individuals.

No. 164

Consistent Efficacy of Cariprazine Across PANSS-Based Factor Scores for Negative Symptoms of Schizophrenia

Poster Presenter: Willie R. Earley, M.D.
Co-Authors: Brian Kirkpatrick, Stephen R. Marder, M.D., Hua Guo, Károly Acsai, István Laszlovszky, Agnesa Avanesian

SUMMARY:

Background: Negative symptoms are a core feature of schizophrenia that significantly contribute to the burden of disease. However, treatments that are specifically effective on this symptom domain are lacking. Cariprazine, a dopamine D3-preferring D3/D2 receptor partial agonist and 5-HT1A receptor partial agonist, is approved to treat adults with schizophrenia (US and Europe) and adults with manic/mixed episodes of bipolar I disorder (US). In a prospective, 26-week, double-blind, active-controlled trial, cariprazine demonstrated efficacy vs risperidone on negative symptoms in stable patients with predominant negative symptoms (PNS) of schizophrenia. To investigate the consistency of the effect of cariprazine on negative symptoms, we conducted post hoc analyses evaluating other PANSS-based negative symptom efficacy measures using data from this prospective study. Methods: The primary efficacy outcome in the prospective study was change from baseline to Week 26 in Positive and Negative Syndrome Scale factor score for negative symptoms (PANSS- FSNS; items N1-N4, N6, G7, G16). Post hoc analyses assessed change from baseline to week 26 on the negative factor score of the PANSS from the pentagonal structural model (items N1-N4, N6, G5, G7-8, G13-14) and on the Liemburg factors for negative symptoms (expressive deficits: N1, N3, N6, G5, G7, G13; social amotivation: N2, N4, G16). Least squares mean (LSM) change was analyzed for each measure using a mixed-effects model for repeated measures. Effect sizes (ES) were calculated using Cohen's d. Results: The intent-to-treat (ITT) population comprised 227 cariprazine- and 229 risperidone-treated patients. In the predefined primary analysis, LSM change from baseline to week 26 in PANSS-FSNS was significantly greater for cariprazine vs risperidone (-8.9 vs -7.4, P=.0022, ES=0.31). In post hoc analysis, LSM change from baseline on the negative factor score of the PANSS from the pentagonal structural model was

also significantly greater for cariprazine vs risperidone (-9.7 vs -8.1, P=.0019, ES=0.31). Evaluation of the Liemburg negative symptom factors also showed significantly greater LSM changes from baseline in favor of cariprazine vs risperidone on both the expressive deficits factor (-6.8 vs -5.7, P=.004) and the social amotivation factor (-3.6 vs -3.0, P=.004). Conclusions: In this analysis, cariprazine treatment consistently resulted in significantly greater negative symptom improvement vs risperidone, regardless of which PANSS-derived outcome was used to measure negative symptom change. This consistent effect for cariprazine vs risperidone on negative symptoms supports the primary findings from the prospective study and further suggests that using cariprazine to treat patients with negative symptoms of schizophrenia may be beneficial.

No. 165

RE-KINECT: A Prospective Real-World Dyskinesia Screening Study and Registry in Patients Taking Antipsychotic Agents: Caregiver Burden Results

Poster Presenter: Andrew J. Cutler, M.D.
Co-Authors: William Lenderking, Karen Yeomans, Huda Shalhoub, Veronique Page, Linda Ross, Chuck Yonan

SUMMARY:

Background: Tardive dyskinesia (TD) is a persistent and potentially debilitating movement disorder that is associated with prolonged exposure to antipsychotics. Caregivers are often instrumental in identifying and managing TD, and this disorder can negatively affect their own lives. However, the impact/burden on caregivers has not been well-defined or researched. RE-KINECT (NCT03062033) is an ongoing registry study that is being conducted in a real-world population of patients exposed to antipsychotics. One of the goals of this study is to characterize the social, emotional, and functional impacts of TD on caregivers. Methods: RE-KINECT is designed to enroll patients from up to 70 US psychiatric practices. Adults with >=3 months lifetime exposure to antipsychotic(s) and >=1 psychiatric disorder(s) are eligible for screening, which involves a clinician looking for abnormal involuntary movements in general body regions (head/face, neck/trunk, upper/lower limbs) and assessment of possible TD. Based on clinician evaluation, patients are assigned to Cohort 1 (without visible signs of involuntary movements) or Cohort 2 (with visible signs and clinician assessment of possible TD). For Cohort 2, caregiver-reported outcomes included: employment status, relationship to patient, burden of patient's health on caregiver's life. Caregivers who reported seeing uncontrollable movements responded to questions about how those movements in the patient affect the caregiver's ability to continue usual activities, be productive, take care of themselves, and socialize. Questions regarding caregiver embarrassment and anger/frustration due to the patient's uncontrollable movements were also asked. Results: Interim data are currently available from 15 caregivers, 11 (73%) of whom reported seeing uncontrollable movements in the person to whom care was provided. Nine of these 11 caregivers (82%) reported that ?2 body regions were affected, and >50% reported that the movements had some or a lot of impact on their own ability to continue usual activities (55%), be productive (64%), take care of themselves (73%), or socialize (73%). A fraction of these 11 caregivers expressed some or a lot of embarrassment (27%) or anger/frustration (18%) as a result of the patient's visible, uncontrollable movements. The majority of all 15 caregivers were related to the patient (73%). Caregivers were either employed full-time (40%) or retired (33%), but some (13%) were not working due to their own disability. The health conditions they helped patients to manage were mental health (60%), chronic disease(s) (33%), and physical activity/nutrition (33%). Conclusion: Current results from this novel registry study suggest that TD can be a substantial burden for caregivers. Further analyses that explore the impacts of this disorder on caregivers will be presented at the meeting.
Supported by Neurocrine Biosciences, Inc.

No. 166

Additive Effect of Number of Environmental Risk Factors in Predicting At-Risk Mental State Status

Poster Presenter: Sara Arranz
Co-Author: Vanessa Sanchez-Gistau

SUMMARY:

Introduction: The "at risk mental state" (ARMS) is defined as people suffering from potentially

prodromal symptoms. Results from a study conducted in the community showed an interaction between childhood trauma, life events and cannabis use on psychosis has been reported to increase together the likelihood of developing a psychotic experience in a community sample. However, a meta-analysis of ARMS studies showed that childhood trauma was a strong risk factor; but did not find an association between cannabis use and the risk of developing psychosis. The role of life events as a risk factor of transition to psychosis has also yield mixed results. In view of this inconsistent results we aimed to investigate whether there is an additive effect of number of environmental risk in predicting at risk mental state status Method: The study included 63 At-risk mental state of psychosis (ARMS) and (n=61) Healthy Controls (HC) . ARMS status was determined by means of the CAARMS fulfilling set criteria and were attending the Early Psychosis Program of Reus (HPU, Institut Pere Mata, Spain). Environmental risk factors included were as follows: 1- Presence of "at least one moderate to severe type of childhood trauma" assessed by the Spanish version of the 28-item Childhood Trauma Questionnaire. 2- Presence of "at least moderate score in the Holmes-Rahe social readjustment scale" which assessed past 12-months life events and 3- cannabis abuse defined as "weekly to daily continued use of cannabis". A binary regression analysis including diagnose status as the dependent variable and the number of environmental factors as independent variable was run. The independent variable was categorized as: 0: absence of environmental factors, 1: presence of 1 factor or 2: presence of 2 or 3 environmental factors. Results: The mean age of the sample was 22.52 years (4.5 SD) with 57.4% of males. No differences regarding age and gender were found between the two groups but HC presented more years of education than ARMS (z=-5.26; p<.000). ARMS reported greater rates of exposure to moderate to severe childhood trauma (X2=18.41; p<.000) and recent stressful life events (X2=3.78; p=.039), but no differences were found in rates of cannabis abuse. Controlling for years of education, logistic regression analysis revealed that being exposed to more than 2 environmental factors increased the risk of presenting pre-psychotic symptoms compared to HC (?=3.63; 95% IC (1.10-11.92); p= 0.03). Being exposed to only one environmental factor did not show significant increase of risk. Conclusions: As previously reported an excess of environmental factors was found in the ARMS group. Our findings provide initial evidence of a cumulative effect of environmental factors on the likelihood to psychosis.

No. 167

Aberrant Tendency of Noncurrent Emotional Experiences and Its Associations With Clinical Profiles in Individuals at Ultra-High Risk for Psychosis

Poster Presenter: Eunchong Seo, M.D.
Co-Authors: Minji Bang, M.D., Ph.D., Eun Lee, M.D., Ph.D., Suk Kyoon An, M.D., Ph.D.

SUMMARY:
Background : The experiences of the noncurrent emotion in schizophrenia patients was reported to be aberrant: less pleasant and more unpleasant emotion. The aims of this study were to investigate whether this aberrant tendency was present in individuals at ultra-high risk for psychosis (UHR), and to explore its relations with various clinical profiles. Methods : Fifty-seven UHR, 49 normal controls were enrolled. The emotional tendency of noncurrent experience was assessed by using the major emotional self-reported response formats, including trait [neuroticism and extraversion of the Eysenck Personality Questionnaire (EPQ)], hypothetical (Chapman's Revised Physical and Social Anhedonia Scales) and retrospective [anhedonia-asociality subscale of Scale for the Assessment of Negative Symptoms(SANS)] measures. The comprehensive neurocognitive battery, self-related belief (Self-perception scale), clinical positive and negative symptom (Scale for the Assessment of Positive Symptoms and SANS), psychosocial function (Global functioning scale: role function and Global functioning scale: social function) were also assessed. Results : UHR subjects reported more unpleasant emotion (neuroticism of EPQ, 16.8±7.3 vs. 7.6±5.0, p<.001) and less pleasant emotion [Extraversion of EPQ (5.5±5.5 vs. 11.8±4.0), Chapman's physical anhedonia (24.2±11.9 vs. 13.9±7.6), Chapman's social anhedonia (22.5±8.7 vs. 9.2±5.2), anhedonia-asociality subscale of SANS (2.6±1.4 vs. 0.1±0.4, p<.001)] than normal controls. In UHR, Self-perception scale was correlated to

Neuroticism of EPQ (r=-.476, p<.001), Chapman's physical (r=-.520, p<.001) and social (r=-.591, p<.001) anhedonia scale. Negative symptoms in UHR was associated with Chapman's physical anhedonia scale (r=.426, p=0.04) and anhedonia-Asociality subsale of SANS (r=.862, p<.001). Global social functioning was related to Extraversion of EPQ (r=.442, p=0.04), Chapman's physical (r=-.559, p=0.001) and social (r=-.438, p=0.04) anhedonia scale, and anhedonia-asociality subscale of SANS (r=-.596, p<.001). Neurocognitive function, positive symptom, global role functioning were not related with any noncurrent emotional experience measures in UHR. Conclusion : These findings of the major self-reported response formats suggest that the aberrant tendency of noncurrent emotional experience (less pleasant emotion and more unpleasant emotion) may exist from the 'putative' prodromal phase. This aberrant emotional tendency-related factors should be focused for the development of the psychosocial intervention for UHR individuals.

No. 168

Cluster Analysis Based on Transformed PANSS Factor Scores Identifies Distinct Symptom Profiles of Patients With Acute Schizophrenia

Poster Presenter: Seth Hopkins
Co-Authors: Ajay Ogirala, Antony David Loebel, M.D., Kenneth S. Koblan

SUMMARY:
Background: We have previously identified an uncorrelated PANSS score matrix (UPSM) that yields transformed PANSS factors with low between-factor correlations.1 Here we utilized uncorrelated PANSS factors and cluster analysis to identify baseline symptom profiles in patients with schizophrenia. In addition, response to treatment was compared for patients with the identified symptom profiles. Methods: Within a pooled sample of 5 placebo-controlled trials of lurasidone in schizophrenia (N=1,710 patients), K-means clustering of baseline UPSM factor scores in MATLAB was used to identify distinct symptom profiles, based on predominant symptom severity in one or more of the transformed PANSS factor domains. We compared key demographic and clinical variables at pre-treatment baseline, and assessed response to 6 weeks of lurasidone treatment, for each of these identified symptom profiles. Results: Cluster analysis using UPSM transformed PANSS Factor scores identified 5 distinct symptom profiles defined by greater severity of a specific UPSM Factor score relative to the mean score for all patients on the respective UPSM factor. For the predominant positive cluster, the mean UPSM positive factor score was 3.9 (vs. A mean score of 2.9 ± 0.9 SD for all patients); for the predominant hostility cluster, the mean UPSM hostility factor score was 2.6 (vs. a mean score of 1.4 ± 1.1); for the predominant disorganized cluster, the mean factor score was 3.0 (vs. 2.5 ± 1.0); for the affective cluster, the mean anxiety and depression factor scores, respectively, were 2.3 (vs. 1.8 ± 0.9) and 2.7 (vs. 1.7 ± 1.0); and for the predominant negative cluster, the mean apathy/avolition and deficit of expression factor scores, respectively, were 3.1 (vs. 2.5 ± 0.9) and 2.5 (vs. 1.8 ± 0.9). Patients in the predominant negative cluster had the highest Negative Symptom Assessment scale score (61 vs. a mean score overall of 53); and patients in the predominant affective cluster had the highest MADRS score (16 vs. a mean score overall of 11). For change in PANSS total score, the largest and smallest lurasidone vs. placebo effect sizes, respectively, were observed in the disorganized symptom profile and the affective symptom profile. The predominant affective symptom profile was characterized by patients who were typically older, weighed more, had longer duration of illness, and were almost exclusively (90%) treated at clinical sites in the USA. Patients in the predominant disorganized subtype tended to have a greater number of prior hospitalizations and had proportionally greater representation in Russia and Ukraine clinical sites. Conclusions: These results indicate that distinct symptom profiles may occur in patients experiencing an acute exacerbation of schizophrenia. Differential response to lurasidone treatment was observed across the various symptom profiles we identified. Patient symptom profiles are considered to be reliable as based on uncorrelated PANSS domains.

No. 169

A Phase 3 Study to Determine the Antipsychotic Efficacy and Safety of ALKS 3831 in Adult Patients With Acute Exacerbation of Schizophrenia

Poster Presenter: Steven Garth Potkin, M.D.
Co-Authors: Bernard Silverman, Adam Simmons, Ying

Jiang, Lauren DiPetrillo, David McDonnell

SUMMARY:
Background: ALKS 3831, currently under development for the treatment of schizophrenia, is composed of a flexible dose of olanzapine (OLZ) and a fixed dose of 10 mg of samidorphan. In a phase 2 study, ALKS 3831 mitigated OLZ-associated weight gain and exhibited antipsychotic efficacy similar to OLZ alone. This phase 3 study assessed antipsychotic efficacy and safety of ALKS 3831 in patients with acute exacerbation of schizophrenia. Methods: This was a 4-week, randomized, double-blind, active and placebo (PBO)-controlled study of ALKS 3831 in patients with acute exacerbation of schizophrenia (ClinicalTrials.gov: NCT02634346). Eligible patients (N=403) were randomized 1:1:1 to ALKS 3831, OLZ, or PBO. Patients were treated in an inpatient setting for the first 2 weeks of the study and could be treated as in- or outpatients for the remaining 2 weeks. Patients were excluded if they received OLZ within 6 months prior to screening. Antipsychotic efficacy was assessed using the Positive and Negative Syndrome Scale (PANSS), Clinical Global Impression-Severity (CGI-S), and CGI-Improvement (CGI-I) scales. Safety and tolerability were assessed as adverse events (AEs). Results: Of 401 patients randomized and dosed to ALKS 3831, OLZ, and PBO, 91%, 89%, and 83% of patients, respectively, completed treatment. The most common reason for discontinuation was withdrawal by patient (6% in the ALKS 3831 and PBO groups, and 7% in the OLZ group). Baseline characteristics were similar between groups. Baseline mean body mass index was higher in the OLZ group compared with the ALKS 3831 group. Baseline mean ± standard deviation scores were 101.7 ± 11.9 for PANSS total score and 5.1 ± 0.7 for CGI-S score. The mean OLZ dose was 18.4mg/day in both active treatment arms. Least squares (LS) mean difference ± standard error (SE) vs PBO from baseline to Week 4 in PANSS total score was -6.4 ± 1.8 (P<.001) for the ALKS 3831 group and -5.3 ± 1.8 (P=.004) for the OLZ group. LS mean difference ± SE vs PBO from baseline to Week 4 in CGI-S score was -0.38 ± 0.12 (P=.002) for the ALKS 3831 group and -0.44 ± 0.12 (P<.001) for the OLZ group. The percentage of patients with an improvement in PANSS response (greater than or equal to 30% improvement from baseline) at Week 4 was 60%, 54%, and 38% in the ALKS 3831, OLZ, and PBO groups, respectively. The percentage of patients with an improvement in CGI-I response (score of less than or equal to 2) at Week 4 was 58%, 51%, and 33% in the ALKS 3831, OLZ, and PBO groups, respectively. Discontinuation due to AEs was low in all groups. Common AEs (greater than or equal to 4%) included weight gain, somnolence, dry mouth, anxiety, headache, schizophrenia, and agitation. Conclusions: ALKS 3831 demonstrated greater antipsychotic efficacy compared with PBO, as measured by the PANSS and CGI-S scale, and was similar to the active control, OLZ. The safety profile of ALKS 3831 was similar to OLZ.

No. 170

Neuroleptic Malignant Syndrome in a Patient After Transitioning From Oral Risperidone to Paliperidone Palmitate

Poster Presenter: Sharon Karki, M.D.
Co-Authors: Gordana Isajloska-Jasmak, Pharm.D., Savitha Kumari Satyasi, M.D., Namratha Prabhu, M.D., Satyajit Mohite, M.D., M.P.H., Shiva Sharma, M.D.

SUMMARY:
A 41-year-old Caucasian male with past psychiatric history of schizophrenia, presented with onset of altered mental status, fever, nausea, vomiting, sialorrhea, and dysphagia that developed two days after his first dose of paliperidone palmitate (28 day intramuscular injection). On exam in the emergency department, he was additionally found to have mutism and severe cogwheel muscle rigidity of both upper and lower extremities. The patient was also found to be febrile, tachypneic, and significantly dehydrated with tachycardia. Laboratory studies revealed leukocytosis, hypernatremia, elevated creatine kinase, and lactic acidosis. JK was admitted to the MICU for treatment of acute neuroleptic malignant syndrome (NMS). He was previously maintained in the community on oral risperidone with partial compliance prior to being switched to a long acting injectable (LAI) antipsychotic. Despite receiving pharmacological treatment, JK's condition worsened until an aggressive treatment approach of a combination of medication and ECT was taken for NMS symptoms, specifically, unresolving catatonia. The course of NMS was so severe that the patient

required lengthy inpatient physical rehabilitation post-NMS resolution. NMS is both a medical and psychiatric emergency that needs to be treated aggressively to prevent development of sequelae post-NMS resolution. Advancing quickly to ECT may be necessary if a patient does not experience full resolution of symptoms with medical management alone. In this poster, a strategy to reduce risk of development of NMS if a patient is initiated on paliperidone LAI for the first time is proposed and methods to prevent development of sequelae post-NMS resolution are discussed.

No. 171

Working With Survivors of Conversion Therapy: A Case Report

Poster Presenter: Mark Joseph Messih, M.D., M.Sc.

SUMMARY:

This case report discusses a 56-year-old Hispanic male with history of bipolar disorder, sex addiction and more than fifteen psychiatric hospitalizations related to his sexual identity. His case offers the opportunity to discuss ways of providing treatment for survivors of reorientation therapy. In particular, this patient represents an underrepresented community both to medical providers and more publicly. In what follows this patient's case I outline literature on patients who reportedly changed their sexualy orientation "Ex-ex gays" and those who have not "ex-ex gays" exists. In this patient's case, his presentation aligns with the reported experiences of both communities. Subsequently this may be representative of an underrepresented patient community that would benefit from future research.

No. 172

Assessing Symptom Time Course in Treatment Planning: A Case Presentation of Cycloid Psychosis

Poster Presenter: Mark Joseph Messih, M.D., M.Sc.
Co-Author: Yasmin Mohabbat, M.D.

SUMMARY:

This case report discusses a patient with two admissions to the inpatient psychiatric unit at Hahnemann Hospital one year apart with acute onset of psychotic symptoms that resolved within several days. His presentations most closely fit with repeated diagnoses of acute psychotic disorder as he did not have symptoms between presentations and was not managed on medications. This prompted the treatment team to ask if his presentation fit with a diagnosis of cycloid psychosis. This case report discusses how the patient's history supports the diagnosis and puts forward that cycloid psychosis is considered as a differential in certain cases. The authors first put forward a brief discussion of the history of psychosis Cycloid psychosis was first described by Karl Kleist in 1926 (1). This originated in the observations of patients with brief periods of psychotic illness of limited duration, followed by periods of recovery that was not better explained by a schizophrenic or manic-depressive disorder. Historically, psychiatrists diagnosed psychosis based on the timing of onset and during of symptoms, with distinct episodes of illness and recovery between them. Diagnoses included reactive psychosis, psychogenic psychosis, atypical psychosis and Bouffée delirante (2) . Characteristics of cycloid psychosis include onset of hours to days, starting at any age and has characteristics of perplexity, confusion, mood swings and motility disorders. Episodes also show full remission between episodes without negative or cognitive decline. It is important to discuss the place of cycloid psychosis as a diagnostic criteria for several reasons. Firstly, patients who experience long asymptomatic periods may not benefit from maintenance antipsychotic medications. This increases the risk of metabolic and cardiac side effects (3). In looking at patient functioning and symptoms between episodes, patients may benefit from different types of maintenance therapy or pharmacotherapy when symptoms are reported. Biochemically, there are also differences between cycloid psychosis and schizophrenia. For example in a study of patients with cycloid psychosis versus patients with schizophrenia, there were noted differences in glutamate metabolism and differences in tryptophan and large neutral amino acids (LNAAs) involved in receptor signaling (Trp/LNAAs ratio) (4). This suggests differences in glutamate signaling. Glycine signaling differed between groups and neuroplasticity was improved in cycloid cases. Researchers suggest this may correlate with a better prognosis. Moving forward, if patient symptom profiles better fit with cycloid psychosis than repeated brief psychotic disorder episodes, this

could inform medication management, outpatient treatment and patient education. For example, if symptoms resolve between episodes, medication management may not be indicated. Patient and family education can be initiated following a first episode.

No. 173

Risk and Protective Factors of Adolescent Suicidal Behavior in Rural Colombia

Poster Presenter: Bernardo Ng, M.D.
Co-Author: Nancy Colimon

SUMMARY:

BACKGROUND – due to a recent rise in suicides, the rural municipality of Inirida in the department of Guainia (population 43,446), Colombia, realized the need of a prevention program. Our group collected data to design such program, for which we engaged in this cross-sectional study of high school students, with the approval of the local health department. NC traveled to the medically underserved community of Inirida, situated in the heart of the amazonic wilderness, which has a population of 20,312 and 80% of its people is of indigenous origin. METHOD – The data collection instrument included the, Patient Health Questionnaire-9 (PHQ-9), Generalized Anxiety Disorder 7-item scale (GAD-7), Godin Leisure Time Exercise (G-LTE), McArthur Scale of Subjective Social Status (M-SSS), and questions on substance use, suicidal behavior, and socio demographic data (BN). The instrument was tested with a local focused group, and modified upon their suggestions. Research assistants were trained and supervised by one of the authors (NC) to administer the instrument during school hours, upon the approval of the local education authorities. The participation was voluntary and anonymous. Statistical analysis was performed (EA) to see the consistency of the instrument, description of the sample, and to establish clinical and/or demographic correlations with the variables addressing suicidal behavior. The suicide behavior questions were: Have you ever felt like going to sleep and not wake up? Passive suicidal ideation Have you ever wished to be dead? Active suicidal ideation Have you ever made plans to take your life? Suicide planning Have you ever attempted to take your life? Suicide attempts RESULTS –The entire sample included N=525 subjects of which 49% were males and 51% females. The average age was 16.5 years old. Near half the sample were attending either 10th or 11th grade. The majority (48%) were indigenous students of 12 different ethnic groups, followed by “colonos” or people of European descent (30.7%), and “mestizos” (20%) or people with both European and indegenous descent. There was no correlation between suicidal behavior and any of the sociodemographic variables such as people in the household, gender, grade attended, or socioeconomic status. There was a direct correlation between suicidal behavior and use of alcohol ($p<0.01$), tobacco ($p<0.01$), and cannabis ($p<0.01$). Although not significant ($p<0.10$) there was higher use of alcohol and cannabis in the lower third of the socioeconomic status. On the other hand, the practice of exercise (i.e. mild, moderate, intense) was inversely related to the presence of suicidal thoughts, plans, or attempts ($p<0.01$). The instrument including the sociodemographic and suicide questions had internal consistency with a Cronbach ? of 0.72. There was a relationship between history of suicide attempt and wish to be dead ($p<0.01$); this relationship was not maintained with the question of suicide plans. DISC

No. 174

Risk of Readmission for Suicide Attempt After Epilepsy Hospitalization: An Analysis of the Nationwide Readmissions Database

Poster Presenter: Kevin Xu
Co-Authors: Kyle Rossi, Anna Kim, M.D., Nathalie Jette, Ji Yeoun Yoo, Kenneth Hung, M.D., Mandip Dhamoon

SUMMARY:

Background: The prevalence of chronic suicidal ideation in epilepsy patients is estimated to be 4 to 5 times higher than in other chronic medical and neurologic illnesses. Hence, the prevention and early identification of suicidal ideation holds significant potential in decreasing 30-day readmissions related to suicidal ideation in epilepsy patients. While there is an increased risk of unprovoked seizures in patients after hospitalization for attempted suicide, no research to date to our knowledge, has examined the converse: risk of suicide attempt following hospitalization for epilepsy. This study sought to examine if epilepsy admission is associated with a

higher readmission risk for suicide attempt compared to index admission for other medical causes. Methods: The Nationwide Readmissions Database is a nationally representative dataset containing data from roughly 15 million hospital discharges. Analysis of ICD-9 codes in year 2013 revealed 58,278 index admissions for epilepsy, and this group was compared with admissions for stroke (N=215,821) and common medical causes (pneumonia, urinary tract infection [UTI], congestive heart failure [CHF], and chronic obstructive pulmonary disease [COPD], N=973,078). 90-day readmission rates for suicide attempts were calculated. Cox regression tested for associations between admission type and suicide attempt readmissions up to 1 year following index admission, in both univariate models and adjusting for medical comorbidity, socioeconomic, and psychiatric variables (psychiatric comorbidities, substance use and alcohol use disorders) at time of index admission. Results: There were 402 per 100,000 readmissions for suicide attempt within 90 days from index admission in the epilepsy group, 43 per 100,000 in the stroke group, and between 37 and 89 per 100,000 in the medical group. Up to 1 year from index admission, unadjusted hazard ratios (HR) for suicide readmissions in the epilepsy group compared to the stroke group were 9.61 (95% CI 7.69-11.90, p<2.0 x 10-16), and 5.02 compared to the medical group (95% CI 4.40-5.73, p<2.0 x 10-16). The adjusted HR for readmission in the epilepsy group was elevated at 4.91 compared to the stroke group (95% CI 3.83-6.27, p<2.0 x 10-16), and 2.66 compared to the medical group (95% CI 2.32-3.05, p<2.0 x 10-16). Conclusion: Our study utilized a nationally representative dataset encompassing almost half of all non-institutionalized U.S. hospitalizations in 2013 and was among the first to show that epilepsy admission was independently associated with more than a three-fold increase in risk of hospital readmission for suicide attempt, even after adjustment for documented psychiatric comorbidity and substance use history at index admission.

No. 175

Relationship Between Clinician and Patient Working Alliance Reports and Clinician Emotional Responses Among High-Risk Suicidal Inpatients

Poster Presenter: Yael Schwartz
Co-Authors: Shira Barzilay, Ph.D., Igor I. Galynker, M.D., Ph.D.

SUMMARY:
Background:Clinician conflicting emotional responses have been linked to poor prospective suicidal outcomes in high risk suicidal patients (Yaseen et al, 2017). A potential mechanism for this relationship is the effect of clinician emotional responses on the working alliance. In addition, attachment style has been shown to impact the alliance (Hietanen & Punamäki, 2006). We examined the associations between clinician emotional responses, patient/clinician views of the working alliance, and the moderation effect of patient attachment styles on these relationships. Methods:172 adult psychiatry inpatients admitted for suicidality in Mount Sinai Beth Israel completed a battery of tests at admission. Measures included the Working Alliance Inventory (WAI), assessing the working alliance via the subscales task, goal and bond, and Relationship Style Questionnaire (RSQ) measuring secure, preoccupied, dismissing and fearful attachment. Treating clinicians filled out the WAI and Therapist Response Questionnaire-Suicide Form measuring clinician emotional responses. Correlation analyses were conducted to assess the relationship between the patient and clinician WAI and clinician emotional responses. We then compared these correlations between different attachment styles to determine the moderation effects of attachment styles on these relationships. Results:No significant correlation was found between clinician and patient WAI scores. Clinician emotional responses negatively correlated with patient WAI total scores (r=-.185,p=.023) as well as with each domain of the patient WAI: task (r=-.182,p=.024), bond (r=-.163,p=.043) and goal (r=-.179,p=.027). Interactions between attachment styles and clinician emotional responses manifested in the patient WAI: Clinician negative emotional responses correlated with patient WAI among low secured (r=-213,p=.044), high preoccupied (r=-252,p=.034), low dismissing (r=-.263,p=.025) and low fearful (r(task)=-.254,p=.026, r(goal)=-.250,p=.029). Among high secure, low preoccupied, high dismissing and high fearful there were no significant correlations. Conclusions: Our results show that

clinicians and patients rarely share similar views of the working alliance. In contrast, clinicians' emotional responses seem to be a significant indicator of patients' views of the alliance; when clinicians feel more negative countertransference, patients are likely to view the alliance more negatively. Hence, clinician emotional responses are a more accurate benchmark of patient views than logical analysis. Additionally, patient attachment style influences the relationship between clinician emotional responses and patient perceptions of the alliance. Awareness of the role patient attachment style plays in the development of the working alliance and the significance of emotional responses can be crucial tools clinicians can utilize to prevent future suicidal behavior among high-risk suicidal patients.

No. 176

Single-Dose, Intranasal Ketamine for Acute Suicide Ideation in the Emergency Department Setting: A Double Blind, Randomized, Placebo Controlled Trial

Poster Presenter: Cheryl McCullumsmith, M.D., Ph.D.
Co-Author: Yoav Domany

SUMMARY:

Background: Suicidal ideation and behavior are major health crises with high morbidity and mortality. About 800,000 people worldwide die annually from suicide. Patients with imminent suicide risk often present to the emergency department, however, currently, no specific treatment exists for acute suicide ideation. Ketamine, an NMDA receptor antagonist has been shown to be a rapid antidepressant agent, with promising anti-suicidal properties. Nasal administration of ketamine enables widespread use over the past intravenous route of administration. The current study was designed to test the safety, tolerability, and efficacy of intranasal ketamine for acute suicidal ideation in emergency department settings. Methods: In a double blind, placebo controlled proof of concept study, 8* adult subjects, suffering suicidal ideation required hospitalization, independently of their diagnosis, were randomized to either intranasal ketamine 40 mg or saline placebo The drug was administer during 10 minutes in 4 times through a nasal spray. Follow-up was scheduled for 30 minutes, one, two and four hours, and on days 1, 2, 3, 4, 7, 14 and 21 days post administration. The main outcome measure was suicidal ideation. Results: Four hours post infusion, a reduction of 14.5 points on the Beck Score for Suicide ideation (BSS) for the ketamine group was documented compared to 6.25 reduction for the placebo group ($p<0.05$). Side effect were mild and resolved within one hour. No serious adverse events were noted. Conclusion: We found intranasal ketamine to be safe, practical and effective for rapid reduction of acute suicidal ideation in emergency settings, independently of diagnosis. Our results are promising and support further study of intranasal ketamine as a treatment for acute suicide ideation.
Keywords: suicide, intranasal, ketamine, acute suicide ideation. * This is an ongoing trail, the number of subjects is expected to rise, and the poster/abstract which will be presented in the convention will reflect the desired number.

No. 177

Frontal Alpha Asymmetry as a Marker of Suicidal Behavior in Major Depressive Disorder

Poster Presenter: Yeonsoo Park
Co-Authors: Wookyoung Jung, Wookyoung Jung, Huije Che, SangWoo Han, Seung-Hwan Lee

SUMMARY:

Depressive patients typically exhibit a greater frontal alpha activity in their left hemisphere than their right. Despite its relationship with depression, not many studies have examined the relationship between frontal alpha asymmetry and suicidal behaviors. We aimed to explore the significance of frontal alpha asymmetry as a biomarker of suicide. Sixty six patients with major depressive disorder, of which 15 were male and 51 were female, were recruited. The participants were separated into two groups based on their median score of the frontal alpha asymmetry in site F7-F8. Asymmetry of the alpha band (8-12 Hz), the low alpha band (8-10 Hz), and the low alpha band (10-12 Hz) were investigated. In addition, we examined the asymmetry of alpha band source activity. Results indicated that suicidal behavior was associated with asymmetry of the low alpha band in the high alpha asymmetry group. Conversely, suicidal behavior was associated with asymmetry of the high alpha band in the low alpha asymmetry group. Moreover,

significant results between alpha asymmetry and suicidal behavior in source regions were only found in the high alpha asymmetry group. Frontal alpha asymmetry, especially that of the low alpha band, seems to be indicative of suicidal behaviors in patients diagnosed with depression.

No. 178

Assessing the Clinical Utility of a Telehealth System for Predicting Suicidal Ideation in Patients With Depression: EpxDepression

Poster Presenter: Medhavi Bhasin
Co-Authors: Jordan Feltes, William Tzeng, Robert Chen

SUMMARY:
Suicide is a leading cause of death worldwide. There is currently no consistently effective model to predict suicide in clinical practice and outside of clinic visits, there is negligible clinician monitoring of high risk patients before a suicide is first attempted. Attempts to assess for future suicidality in psychiatric patients using machine learning algorithms have historically been poor and required invasive screens, biological sampling, or robust integration of electronic tools with patient health records. Using a text-based mobile health service as our framework for data collection, we explored whether machine learning models could be utilized to predict future suicidal ideation in patients with Major Depressive Disorder. A total of 106 adults with a diagnosis of Major Depressive Disorder (65 women [61%] and 41 men [39%] were enrolled in our mobile health tool across three outpatient community mental health treatment services in a mid-sized US midwestern city and received daily text message queries about their mood and a biweekly text-message PHQ-9. Participants had a mean (SD) age of 48.2 (12.7). For each individual patient, we used the variables of mood, response rate, number of alerts, response latency, user feedback, and PHQ-9 scores to predict 12 week suicidal ideation using supervised machine learning algorithms (Naive Bayes classification; logistic regression classification; support vector machine [SVM] classification; and random forest classification). Relevance of each predictor variable was determined. During 12 weeks of study, patients demonstrated a decrease in PHQ-9 score of 4.5 points (p= 0.012) but no change in mood scores. Mood scores of zero and one out of ten were associated with high rates of suicidal ideation (41% and 64% respectively) and a mood score of two or greater out of ten was highly specific (99% specificity) for lack of suicidal ideation within our population. Accuracy of machine learning models [Accuracy, ROC] was highest for naive bayes [85.7%, 0.900], followed by logistic regression [81.0%, 0.926], random forest [76.2%, 0.880], and linear SVM [76.2%, 0.833]. Predictor variables with the highest relevance included mood, 2nd PHQ-9 score, and response rate. Prediction of patient suicidality months before they report it can be achieved with high accuracy using machine learning algorithms built from data collected by mobile health SMS service. Key benefits of our method include: minimally time or resource intensive measurement, patients never needing to step foot in a clinic, and especially high sensitivity in some of our models. High sensitivity is an essential characteristic of this type of algorithm to prevent patients from slipping through the cracks as false negatives. Results warrant future research into the external validity of machine learning models in predicting suicidal ideation and suicide in other populations.

No. 179

Deep Learning for Personalized Treatment of Depression

Poster Presenter: Jerome Williams
Co-Author: David Alessandro Benrimoh, M.D.

SUMMARY:
Personalization of treatment for depression may help improve efficacy, reduce time to remission, and save on healthcare costs. There has been a recent surge of interest in using machine learning methods to achieve precision medicine and to predict outcomes like suicide. Here we describe the development of a deep-learning powered clinical decision aid for healthcare professionals. Its primary outcomes are to help clinicians select the most effective treatment plans (pharmacological, psychotherapeutic, etc.) based on individual patient characteristics while mitigating adverse side effects by producing personalized side effect profiles, allowing doctors to provide greater personalized care to a larger number of patients. We achieve this by training our model on large datasets which

include information about socio-demographic factors, symptom profiles, patient preferences, treatment response profiles, as well as genetic, metabolic, endocrine, immunological, and imaging data. This data comes primarily from high-quality clinical trials, such as those sponsored by the NIMH, and large epidemiological studies. We are using deep learning to understand patient profiles which will best respond to certain treatments. We take as inputs patient features and return a list of possible treatments ranked in order of confidence. Such a task requires deep layers, given the many levels of abstraction needed to express complex dependencies in the data (as an example, the relationship between a given symptom and a given treatment may depend on combinations of other factors which cause the symptom or complicate its treatment). Our deep learning network implements interpretability techniques, such as t-SNE and receptive field analysis, which help it explain its decisions. Our network architecture uses a feedforward Deep Belief Network (DBN), in order to make use of unstructured data like electronic medical records, with self-normalizing Scaled Exponential Linear Units (SELUs) to improve model training. So far, our machine learning model has been able to use over one hundred participant features from the Canadian Community Mental Health Survey to predict lifetime suicidal thoughts with 70% accuracy. With this promising proof of concept, we hope to use our system on therapeutics data to build a clinical decision aid.

No. 180

The Effect of Complex Developmental Trauma on Fear Responses in a Sprague-Dawley Rat Model: Preliminary Study

Poster Presenter: Jun Hyung Kim
Co-Authors: Minkyung Park, Jung Jin Ha, Chiheon Lee, Soo Hyun Park, Jeong-Ho Seok

SUMMARY:
Background: Complex developmental trauma defined as the traumatic incidents repeatedly occurring during developmental periods plays a pivotal role in developing adult personality disorders in adulthood. Past trauma animal model studies have generally exhibited single modality such as maternal separation or fear conditioning; however, the effect of various modalities of trauma in rats has been rarely studied. We designed an animal model to investigate the effects of complex developmental trauma. Methods: Male Sprague-Dawley rats (n=32) in this study were classified into 5 groups: maternal separation only (n=6), juvenile isolation only (n=5), footshock only (n=6), complex trauma (n=9), and control (n=6). Maternal separation only group (MSO), juvenile isolation only group (JIO), and footshock only group (FSO) were exposed to a single type of trauma. While the complex trauma group (CT) experienced all three types of traumas (maternal separation, juvenile isolation, footshock), the control group (CO) never experienced any trauma throughout the experiment. We compared fear responses at week 4 and week 8 through total freezing time, total freezing episodes, and ultrasonic vocalization (USV). Analyses of covariance were conducted to find significant changes of behavior between groups. Results: Our results show that CT group was associated with the highest total freezing time in the conditioned fear response test, and had more total freezing episodes than any of the other groups except for FSO group. The only 2 groups associated with USV emission were CT and FSO; there was no significant difference in the total time of USV between the two groups. Conclusion: Using our rat model, complex developmental trauma may have a more detrimental impact on anxiety-like behavior in adulthood. Further study on related structural and functional changes in the brain may give us a new insight for pathogenic mechanism from the immunobiological perspective and may shed light on the development of a new treatment for patients with personality disorder and complex posttraumatic stress disorder.

No. 181

Mental Health Outcomes of the South Carolina Law Enforcement Assistance Program Post-Critical Incident Seminar: Retrospective Review of 2012–2016 Data

Poster Presenter: Joseph C. Cheng, M.D., Ph.D.
Co-Authors: Jeffrey Korte, R. Gregg Dwyer, M.D., Ed.D.

SUMMARY:
In the performance of their duties as first responders, law enforcement officers (LEOs) are

subject to stressors that increase the risk of mental health disorders such as PTSD, depression, anxiety, and alcohol/substance use disorders. Since 2000, the South Carolina Law Enforcement Assistance Program (SCLEAP) has conducted a Post Critical Incident Seminar (PCIS) for LEOs identified as having been exposed to trauma that may impact their mental health and fitness for duty. The PCIS is a multiday program that provides supportive and educational interventions and a mechanism for follow-up referrals for stress management and associated issues. Over 1,200 LEOs have participated in the SCLEAP PCIS for critical incidents in South Carolina and other states, including the events of 9/11, Columbine, Virginia Tech, Sandy Hook, and Mother Emmanuel Church. SCLEAP has collected information including descriptive data on the critical incidents and stress as well as psychometric scales for posttraumatic stress disorder (PTSD), depression, and anxiety. These data not only support SCLEAP's service mission, but also inform the ongoing processes of programmatic and research protocol development underway in South Carolina and multiple collaborating states. In this study, survey results from 436 PCIS participants from 2012 to 2016 were analyzed for baseline characteristics. The median time between traumatic incident and PCIS attendance was 2.5 years. Longitudinal data from a subset of this cohort were also collected at two and six months after PCIS participation in order to monitor symptom severity and for programmatic feedback and development. Preliminary analyses of psychometric assessments at baseline indicate a high prevalence of symptomatology consistent with PTSD, as assessed by Impact of Events Scale-Revised, whereas the prevalence of depression or anxiety, as assessed by Beck Depression Inventory-2 and Beck Anxiety Inventory, respectively, was relatively lower than PTSD. Critical incident descriptors and specifiers were also assessed and several of them were significantly associated with more severe self-reported PTSD symptomatology. Follow-up surveys of a subset of this sample demonstrated marked symptomatic improvement at two and six months after PCIS participation. Coping skills and other benefits of PCIS training as well as continued treatment were assessed during follow-up. This presentation coincides with this year's theme, "Building Wellbeing Through Innovation," by bringing to light mental health issues of a population uniquely exposed to trauma with the potential for related psychiatric sequelae, yet who are also often reticent to engage in mental healthcare. This study represents an early step in integrating quantitative analyses to the clinical and service mission of the

No. 182

A Reliability and Validity Study of the Korean Version of Clinician-Administered Posttraumatic Stress Disorder Scale for the *DSM-5*

Poster Presenter: Wonhyoung Kim
Lead Author: Joo Eon Park

SUMMARY:
Background In this study, we aimed to develop and validate the Korean version of Clinician-Administered PTSD Scale for DSM-5 (K-CAPS-5). Methods Total 247 subjects were recruited from 8 medical institution in all states and territories of South Korea, from February 2016 until March 2017. Among 247 subjects, 71 subjects with PTSD, 74 subjects with mood disorder or anxiety disorder as a psychiatric control group, and 99 subjects as a healthy control group. PTSD and other psychiatric disorders were diagnosed by the structured clinical interview for DSM-5-research version (SCID-5-RV). The K-CAPS-5 was performed among all 247 subjects. The Beck Depression Inventory-II (BDI-II), the Beck Anxiety Inventory (BAI), the Impact of Event Scale-Revised (IES-R), and the Spielberger State Trait Anxiety Inventory (STAI) were also performed to assess the correlations with the scores of K-CAPS-5. To assess test-retest reliability, the PTSD patients with stable PTSD symptoms only included and agreed to a second K-CAPS-5 assessment. Results Internal consistency for the K-CAPS-5 total score was 0.92 at baseline. Alpha coefficients for the intrusion, avoidance, cognition/mood, and arousal/reactivity were 0.83, 0.71, 0.82, and 0.75, respectively. The total scores±standard error (SE) of K-CAPS-5 in the PTSD group, the psychiatric controls and normal controls were 33.03±1.07, 18.00±9.79, and 6.18±5.86, respectively. These values were significantly differed by ANOVA (overall $F=115.87$, $p<0.001$). PTSD diagnosis was almost perfect agreement ($k=0.893$), dissociative subtype of PTSD was almost perfect agreement ($k= 0.839$). According to the detailed diagnosis criteria, the Cohen's kappa

coefficient of traumatic experience was 0.705, which corresponds to substantial agreement, and the Cohen's kappa coefficient of the intrusion, avoidance, cognition/mood, and arousal/reactivity was all more than 0.910, which were almost perfect agreement. The total K-CAPS-5 score was correlated with BDI (r=0.58, p<0.001), BAI (r=0.67, p<0.001), IES-R (r=0.78, p<0.001), and STAI-T (r=0.37, P=0.003). Thus, the correlation of K-CAPS-5 was strong with IES-R, and relatively weak with STAI-T, and intermediated with BDI-II. The AUC of the K-CAPS-5 is 0.92 and its standard error is 0.022 (p<0.001). The highest diagnostic agreement was found at a total severity score of 24, where the sensitivity and specificity were 88.73% and 93.18%, respectively. Conclusion Korean version of CAPS-5 had good psychometric properties and may be used as a reliable and valid instrument to diagnose and assess PTSD according to DSM-5.

No. 183

Community-Based Analysis of Violence, Substance Abuse, and PTSD in Newark, NJ

Poster Presenter: Philip Bonanno
Lead Author: Uma Raman
Co-Authors: Aparna Govindan, Devika Sachdev, Atharva Dhole, Lama Noureddine, Oluwafeyijimi Salako, Ann Nduati, Jenieve Guevarra, Jessica Tu, Mark Seglin, Cheryl Ann Kennedy, M.D.

SUMMARY:
Introduction In the past decade, statistics have shown as many as 112 murders within Newark in one year, much of which researchers have attributed to gang violence, revenge and drug-related activity. Research has also indicated that those directly or indirectly exposed to violence are at greater risk for PTSD, depression, and anxiety symptoms as well as high-risk health behaviors such as alcohol abuse, substance abuse, and aggression. Through the investigation of PTSD symptoms, hopelessness, substance use, and engagement in violence in the Newark Community, we aim to increase awareness of the adverse impact of violence on community members and to inform mental-health related interventions. Methods This study was conducted through a random convenience sample of 93 Newark residents, recruited from various community organizations. Current data is preliminary and the study is ongoing with a target sample of 150 participants. Self-report, anonymous, paper surveys were administered. The survey consisted of demographic information, the PCL-1 PTSD screening tool, Beck's Hopelessness Scale, and questions assessing frequencies of alcohol use, drug use, and engagement in fights. IRB Approval was obtained from Rutgers University. Results Preliminary analyses showed that 34.4% (95% CI [25.2, 45.2]) of our sample screened positive for PTSD symptoms, 35.4% (95% CI [25.8, 46.1]) engaged in at least one fight in the past month, and 24.7% (95% CI [16.4, 34.8]) exhibited at least mild hopelessness per the Beck's Hopelessness Scale. Furthermore, 22.6% (95% CI [13.9, 31.2]) binge drank at least once in the past month, compared to 16.3% nationally, and 24.4% (95% CI [15.4, 33.5]) used illicit drugs at least once in the last month, compared to 10.1% nationally. A one-way between subjects ANOVA suggested a significant effect of PTSD symptom severity on frequency of drug use [F(5,83) = 2.79,p = 0.02], maximum drinks consumed in one sitting [F(7,83) = 2.93, p = 0.01], frequency of binge drinking [F(5,85) = 2.46, p = 0.04], and fight engagement frequency [F(10,78) = 2.44, p = 0.01]. A separate one-way between subjects ANOVA suggested a significant effect of hopelessness on frequency of binge drinking [F(5,87) = 4.00, p = 0.003], maximum drinks consumed in one sitting [F(7,85) = 2.75, p = 0.01], and fight engagement frequency [F(10,80) = 2.01, p = 0.04]. Discussion Preliminary results indicate that nearly a third of our sample exhibits PTSD symptoms, aggressive behavior, and hopelessness. Additionally, levels of binge drinking and illicit drug use found in our sample significantly exceeds the national statistics. Through continued investigation, this study aims to not only underscore the urgent need for healthcare system interventions to address mental illness and health-risk behaviors, but also to influence community-wide initiatives and policies that may decrease community violence and mitigate the adverse effects on community members.

No. 184

Emotional Face Matching Task in IPV-PTSD Mothers and Non-PTSD Controls, and Their Children: Its Relationship With the TEC

Poster Presenter: Daniel Scott Schechter, M.D.

SUMMARY:
This is a longitudinal study of children (5 to 9 years old) who were evaluated in Phase I of the Geneva Early Childhood Stress Project (ages 12-42 months). Results during Phase 1 suggested that mothers with interpersonal violence-related posttraumatic stress disorder (IPV-PTSD) showed disturbances in emotion-appraisal. This study tests the hypotheses: 1) child abilities in emotion comprehension using the Test of Emotion Comprehension (TEC) are associated to maternal and child performances in an Emotional Face Matching Task (EFMT); 2) maternal attributions of child capacities to understand emotions are related to maternal and child performances in an EFMT. 34 mothers and their children (19 IPV-PTSD mothers and 15 non-PTSD controls) performed an EFMT. The task requires matching faces sharing similar emotions. We ran non-parametric correlations using Spearman's test. We controlled for depression (BDI) and socio-economic status (SES) which demonstrated no influence in our data ($p>.05$). Results obtained in children demonstrated that increased maternal overreading fear and child overreading of anger and fear, are correlated to lower child capacities in understanding the role of beliefs and desires on emotions, and the distinction between own and others emotions (mental dimension of the TEC). The overall child emotion comprehension (emotion dimension) was also related to increased child errors in angry faces and overreading anger and fear. When considering maternal attributions of her child capacities in emotion comprehension, mothers demonstrating an increased number of errors for angry, fearful and happy faces, and fear overreading, expect their children to present lower abilities in understanding the impacts of external events on emotions or in emotional faces recognition (external TEC dimension). These results demonstrated that child abilities in emotion comprehension along with their mother's attributions related to the same emotion appraisal, are correlated with both mothers and children performances in the EFMT. Thus, these difficulties in emotion recognition (EFMT) and comprehensio

No. 185
Effectiveness, Feasibility and Acceptability of Positive Psychology Interventions in Patients With Severe Mental Illness: A Systematic Review
Poster Presenter: Bart Geerling
Co-Author: Anja Stevens, M.D.

SUMMARY:
Introduction: Positive psychology interventions (PPIs) have been shown to improve well-being in healthy individuals or people with mild to moderate psychopathology. However, the effect of PPIs in individuals with severe mental illness is scarcely known. The aim of the current study was to systematically review literature on applications of positive psychology in severe mental illness and examine the effectiveness of PPIs in improving mental health and clinical outcomes. Method: The study was prepared and conducted following the PRISMA guidelines for preferred reporting items for systematic reviews and meta-analyses. A systematic literature search was conducted by searching the databases Scopus, PsycINFO and PubMed The included studies were rated on methodological quality and outcome data was extracted from the included reports. Meta-analyses were performed for well-being as primary outcome at post-treatment and follow up. Results: In total, 14 studies were included representing 711 participants with severe mental illness. From the 14 studies, 9 studies were randomized controlled trials and 5 studies used uncontrolled study designs. Results of the systematic review and analyses will be prepared at the moment of the conference. Conclusions: It can be concluded that the amount of studies researching the effectiveness, feasibility and acceptability of PPIs in severe mental illness is scarce and predominantly contains studies with a small number of participants and limited power. Nevertheless, presented results are promising and show that PPIs can serve as suitable treatment addition for individuals with severe mental illness. Implications arising from this study include a call for research on this field and the need for more consensus on which outcomes are used. Key words: Well-being, positive psychology, severe mental illness, meta-analysis, interventions

No. 186
Low-Field Magnetic Stimulation May Improve Depression by Increasing Brain-Derived Neurotrophic Factor
Poster Presenter: Le Xiao, M.D.

SUMMARY:

Background: Low-field magnetic stimulation (LFMS) has mood-elevating effect, and the increase of brain-derived neurotrophic factor (BDNF) is associated with antidepressant treatment. We evaluated the effects and association with BDNF of rhythmic LFMS in the treatment of major depressive disorder (MDD) . Methods: Twenty-two MDD patients were randomized to rhythmic alpha stimulation (RAS) or rhythmic delta stimulation (RDS), with 5 sessions/week, lasting 6 weeks. Outcomes assessment included the 17-item Hamilton Depression Rating Scale (HAMD-17), Hamilton Anxiety Rating Scale (HAMA) and Clinical Global Impressions-Severity scale (CGI-S) at baseline and week 1,2,3,4 and 6. Serum BDNF level was measured at baseline, week 2, 4 and 6. Results: HAMD-17, HAMA and CGI-S were significantly reduced in both RAS and RDS. RAS had numerically greater reduction in HAMD-17 than RDS (8.9±7.4 vs. 6.2±6.1, effect size (ES)=0.40), while RDS had greater improvement in HAMA (8.2±8.0 vs. 5.3±5.8, ES=0.42). RAS was associated with clinically relevant advantages in response (54.5% vs. 18.2%, number-needed-to-treat (NNT)=3) and remission (36.4% vs. 9.1%, NNT=4). BDNF increased significantly during the 6-week study period (P<0.05), with greater increases in the RAS at weeks 4 and 6 (ES=0.66-0.76) and statistical superiority at week 2 (p=0.034, ES=1.23). Baseline BDNF in the 8 responders (24.8±9.0 ng/ml) was lower than in the 14 non-responders (31.1±7.3 ng/ml) (p=0.083, ES=-0.79), and BDNF increased more in responders (8.9±7.8 ng/ml) than non-responders (1.8±3.5 ng/ml)(p=0.044). The BDNF change at week 2 was the most strongly predicted response (p=0.016). Conclusion: Rhythmic LFMS was effective for MDD. BDNF may moderate/mediate efficacy of LFMS.(The whole manuscript of the study has been accepted to publication by CNS spectrums in Augest 2017)

No. 187

Effects of Mindfulness Based Art Therapy on Psychological Symptoms in Patients With Coronary Artery Disease

Poster Presenter: Min-Jung Soh, M.D.
Co-Authors: SeungHo Jang, Kuy Haeng Lee, Hye Jin Lee, Sang-Yeol Lee, M.D.

SUMMARY:

Background: Mindfulness Based Art Therapy induces emotional relaxation in coronary artery disease patients, and is a treatment known to improve psychological stability. The objective of this study was to evaluate the treatment effects of MBAT for coronary artery disease patients. Methods: A total of 44 coronary artery disease patients were selected as participant, 21 patients belonged to a mindfulness-based art therapy (MBAT) group, and 23 patients belonged to the control group. The patients in the MBAT group were given 12 sessions of treatments. To measure depression and anxiety, Beck Depression Inventory (BDI) and Trait Anxiety Inventory (TAI) were used. Anger and anger expression were evaluated using the State Trait Anger Expression Inventory (STAXI). The treatment results were analyzed using two-way repeated measures ANOVA. Results: The results showed that depression, trait anxiety, and anger decreased significantly and anger control improved significantly in the MBAT group. In the control group, however, there was no significant change. Conclusions: MBAT can be seen as an effective treatment method that improves coronary artery disease patients' psychological stability. Evaluation of treatment effects using program development and large-scale research for future clinical application is needed.

No. 188

The Role of Sociosomatics in Fighting Stigma and Increasing Wellness in Muslims' Communities

Poster Presenter: Lama Muhammad, M.D.

SUMMARY:

Background: The prejudiced prevailing trend blames Muslims for terrorist attacks, which increases the already significant stigma of mental illness in Muslims' communities. All above deserve attention as sources of negative mental health prognosis and health disparities. Method: The presenter will introduce the concept of "Sociosomatics" as a solution to fight stigma and increase wellness in Muslims' countries and communities. The presenter will describe, using clinical examples, the importance of Sociosomatics in Islamic culture. Results: Case 1: An 18-year-old Iraqi female has been suffering from depression symptoms for two years. She was seen

by her dermatologist, the latter suggested the psychiatric referral, patient said: “I am not crazy, one of the best Islamic clerks in the mosque is helping me, simply I am cursed”. Patient was motivated to hear about Sociosomatics. Case 2: A 28 y/o Syrian patient with scalp wound, refused to remove her hijab for primary team for examination; “I need a female to examine me, and it is normal in my country to obey my husband, he can hit me, it is cultural!”. The primary team contacted a Syrian female psychiatric resident who said: “husbands can’t hit wives not legally and not ethically in Syria, similar cases there consider noxious”. This latter resident examined the patient’s head. Patient refused psychiatric help, however, agreed with Sociosomatics. Case 3: A 45 y/o middle eastern male with a chart diagnosis of Bipolar II disorder got evaluated by doctor M from his same country and background. After three appointments Dr. M changed the patient diagnosis to Borderline personality disorder. Dr. M noted that the previous provider considered many of patient’s personality symptoms as cultural. Discussion: Sociosomatic medicine can crystallize a great aid to deal with the psychiatric illness in Muslims’ countries and with immigrants and refugees with Islamic background. Patients’ customs and traditions with islamophobia consequences interfere with mental health, diagnosis reflection, and even presentation. With the rise of global village term, culture shock can be happened with immigration or without. Knowing the definition of -others- will help billions in understanding human natures and learning new coping skills and resilience. Sociosomatics is the art of learning: Therapeutic alliance barriers, handling eastern taboos, screening for suicidality and homicidality differences, use specific mental status exam based on pe

No. 189

“The Long Walk Home”: New Psychiatric Interview Style to Fight Racism and Enhance Wellness

Poster Presenter: Lama Muhammad, M.D.

SUMMARY:

Background: Minority populations will become the majority in the United States in 2043. Patients/providers from ethnic minorities are likely to have experienced discrimination in some fields, which affects both sides’ wellness. While cultural formulations in psychiatry have already been codified in the DSM, the extent of its use to involve wellness lags the growing needs. **Methods:** The presenter will introduce the concept of “Translating to psychiatry” a cultural approach to the psychiatric interview as unprecedented way of fighting racism. The presenter will describe, using clinical examples, the application of this style into the psychiatric interview. **Results:** Case 1:A 23-year-old Egyptian female has been diagnosed with Bipolar I. After being informed about the diagnosis, the patient started to cry: “you should assure me that this is my diagnosis, how you say that to a person with Hijab? The psychiatrist replied: “Now I am you and I will summarize the symptoms, please interrupt me and correct when I am wrong.” The psychiatrist put her concerns as MD in the patient own statements with “I.” After that, patient was very grateful, she got stabilized on lithium and accepted psychotherapy referral. Case 2: Iraqi American 40-year-old female patient, got admitted for the 10th severe asthma attack this year. Patient said, “nothing can stop the war!” “yes, I agree I have mental illness stigma, in my culture this is normal!” Patient calmed down after the psychiatrist interpreted her feelings, nonverbal communications, and cultural mental status exam and explained to her about depression. After three months of CBT, patient stayed free from asthma attacks for one year. Case 3: An Arab psychiatric resident was screening for cognition with the question: “What was the name of the president who freed the slaves?” The patient replied: “You mean freed you, you Arab jerk?” The stunned resident replied with a smile: “He might have, let’s speak about this later.” The same patient apologized to the resident later after she backed off and continued to care for him. **Discussion:** Will take place In the Conference. **Conclusion:** Optimal enhancing of patients’ and providers’ wellness is possible with greater recognition of cultural conflicts, racism varied presentations, and use of rejuvenation psychiatric interview style.

No. 190

WITHDRAWN

No. 191

Course of Bipolar Disorder in Pregnant and Non-

Pregnant Women With Bipolar Disorder or Depressive Disorder: A Systematic Review
Poster Presenter: Anja Stevens, M.D.
Co-Author: Peter J.J. Goossens

SUMMARY:
Objective In practice, women with a bipolar disorder or a depressive disorder often ask their physician about the impact of pregnancy on the course of their mood disorder. The postpartum period is considered as a time of high risk, however, there is controversy about the effect of pregnancy on the course of mood disorders. We conducted a systematic review about the relationship between pregnancy and mood disorders. Methods The review was prepared and conducted following the PRISMA guidelines. A systematic literature search using the keywords bipolar disorder, depressive disorder, pregnancy, course, risk factors was conducted by searching the databases Embase, PsycINFO and PubMed. The included studies were rated on methodological quality and outcome data were extracted from the included reports. Results Preliminary results: most of the studies were retrospective and there is a paucity of prospective studies. The prospective studies in general are medication discontinuation studies. The results will be presented at the conference. Conclusion To really understand the influence of pregnancy on the course of mood disorders prospective studies are needed. Acknowledgments: no funding of speakers or traveling costs

No. 192
Feasibility of a Mindfulness-Based Cognitive Therapy Group Intervention as an Adjunctive Treatment for Postpartum Depression and Anxiety
Poster Presenter: Shaila Misri, M.D.

SUMMARY:
Women experiencing moderate to severe depression and anxiety with a postpartum onset (12 months following childbirth) may not achieve complete symptom remission with pharmacotherapy. This study assessed whether adding a Mindfulness-Based Cognitive Therapy intervention (MBCT) to women on pharmacotherapy experiencing residual depression and/or anxiety would result in recovery from their illness. Methods: Mothers with postpartum depression and/or anxiety are being recruited through the Reproductive Mental Health Program, Women's and Children's Hospital, Vancouver, BC. Women either participated in an eight-week MBCT (intervention group) or continued with treatment as usual (control group). Both groups completed measures of Major Depressive Disorder (Patient Health Questionnaire; PHQ-9), Generalized Anxiety Disorder (Generalized Anxiety Disorder 7-item; GAD-7) and Mindfulness (Mindful Attention Awareness Scale; MAAS) at three different time points: baseline, week four and week eight. Results: There was a greater decline in depression and anxiety scores in participant group compared to controls. However, while the participants reached an asymptomatic state, the controls did not. Conclusions: Postpartum patients with anxiety and/or depression responded to MBI as an adjunctive therapy. Depression symptoms responded relatively early compared to anxiety symptoms.

No. 193
Sleep Deprivation Unmasks Performance Deficits Following Mild Traumatic Brain Injury
Poster Presenter: Allison Brager

SUMMARY:
Introduction: Subjective cognitive complaints are common in the chronic stages (>3 months since injury) of mTBI, yet there is limited evidence of objective neurocognitive deficits in this population. Neuroimaging studies have demonstrated that although cognitive performance is similar between mTBI individuals and controls, mTBIs have broader utilization of frontal and parietal brain regions during cognitive testing. Therefore, it has been suggested cognitive performance is preserved following mTBI due to changes in neural resource allocation (i.e., compensatory processes). Sleep deprivation, which limits neural compensation capability, may therefore "unmask" cognitive difficulties in this population. Methods: Given this, in individuals with a chronic history of mTBI (and uninjured controls), we compared psychomotor vigilance test (PVT) performance and decision making (via the Iowa Gambling Task [IGT]) following normal sleep, total sleep deprivation, and a recovery period. We predicted mTBI individuals would lack compensatory capabilities during sleep deprivation, signified by poorer PVT and IGT performance relative to controls.

Mixed model ANOVA tests were used to calculate whether condition (baseline, sleep deprivation, recovery) interacted with injury group (mTBI/no mTBI). Results: For PVT measures, both groups performed worse during sleep deprivation than baseline and recovery, and, as predicted, there was a significant interaction between condition and group for several measures (e.g., false starts [$F(2,43.29) = 4.58$, $p = 0.016$], speed [$F(4,49.87) = 4.43$, $p = 0.017$], and minor lapses [$F(2,35.12) = 3.47$, $p = 0.042$]), such that the mTBI group had poorer performance during the sleep deprivation condition than controls. However, in contrast, neither sleep deprivation nor mTBI status impacted IGT performance.

No. 194

Improvement in ADHD-Related Symptoms and Behaviors in Children With ADHD Treated With Dasotraline: Results of a Post Hoc ADHD-RS-IV Item Analysis

Poster Presenter: Robert Goldman
Co-Authors: Andrei Pikalov, Ling Deng, Antony David Loebel, M.D.

SUMMARY:
Background: Dasotraline is a potent inhibitor of pre-synaptic dopamine and norepinephrine in development for the treatment of ADHD in children and adults. The PK profile of dasotraline is characterized by slow absorption and a long elimination half-life that permits once-daily dosing. The efficacy of the 4 mg/d dose of dasotraline in children with ADHD was demonstrated in a randomized, double-blind, placebo-controlled study. The aim of the current post-hoc analysis was to evaluate change in specific ADHD symptoms and behaviors among children who participated in this study. Method: Children age 6-12 years with a DSM-5 diagnosis of ADHD were randomized to 6 weeks of double-blind, once-daily treatment with dasotraline (2 or 4 mg) or placebo. The primary efficacy endpoint was change from Baseline in the ADHD Rating Scale Version IV–Home Version (ADHD RS-IV HV) total score at Week 6. In this post-hoc analysis, change from Baseline to Week 6 for each of the 18 individual ADHD RS-IV items was assessed using an MMRM analysis. Result: At the primary Week 6 endpoint, treatment with dasotraline was associated with statistically significant Week 6 improvement in the ADHD RS-IV HV total score for the 4 mg/d dose vs. placebo (-17.5 vs. -11.4; $P<0.001$), but not for the 2 mg/d dose (-11.8 vs. -11.4; ns). A total of 14/18 ADHD RS-IV items were significantly improved on dasotraline 4 mg/d vs. placebo: item-1-poor attention/careless mistakes (P=0.004), 2-fidgeting (P=0.002), 4-difficulty staying seated (P=0.017), 5-difficulty listening (P=0.031), 6-hyperactive (P=0.004), 7-difficulty following instructions/finishing work (P=0.001), 9-disorganized (P=0.032), 10-restless/driven to move (P=0.013), 11-avoidance of tasks requiring effort/focus (P=0.005), 12-talks excessively (P=0.017), 13-loses things (P=0.050), 15-easily distracted (P=0.004), 16-difficulty waiting turn (P=0.017), and 17-forgetful in daily activities (P=0.015). Improvement on the following 4-items of the ADHD RS-IV did not achieve significance on the 4 mg/d dose of dasotraline: 3-difficulty sustaining attention (P=0.10), 8-difficulty playing quietly (P=0.079), 14-blurting out answers before question has been completed (P=0.18), and 18-interrupts/intrudes on others (P=0.054). Treatment with the 2 mg/d dose of dasotraline was not associated with significant improvement vs. placebo on any of the individual ADHD RS-IV items. Conclusion: In this placebo-controlled study of children with ADHD, 6 weeks of treatment with dasotraline 4 mg/d (but not 2 mg/d) was effective in treating a wide range of ADHD-related symptoms and behaviors as assessed by the ADHD RS-IV scale.

No. 195

Right Hippocampus Atrophy Is Independently Associated With Alzheimer's Disease Patients With Psychosis, Regardless of Frontal Volume

Poster Presenter: Jayoung Kong
Co-Author: Kangyoon Lee

SUMMARY:
Purpose: The purpose of this study is to determine whether regionally distributed medial temporal cortex (MTC) thickness (or hippocampus volume) and frontal lobe volume are independently associated with the onset of Alzheimer's disease (AD) patients with psychosis. Methods: Altogether, 26 AD patients with psychosis (AD+P) and 48 AD patients without psychosis (AD-P) matched for age, gender, duration of AD and clinical dementia rating sum of box (CDR-SOB), were identified from the

Memory Impairment Clinic at Pusan National University Hospital in South Korea. All participants met the National Institute of Neurological and Communication Disorders and Stroke/Alzheimer Disease and Related Disorders Association (NINCDS-ADRDA) criteria for probable AD. Psychosis was diagnosed according to Jeste and Finkel's proposed diagnostic criteria for psychosis of AD. All participants underwent 3-T magnetic resonance imaging (MRI) and three-dimensional magnetization prepared rapid gradient echo (3D-MPRAGE) sequence were acquired. The FreeSurfer version 5.1 software package was used to analyze cortical thickness or volume in 3D T1-weighted images. Analysis of variance was used to investigate the differences on cortical thickness or volume of total frontal cortex, total temporal cortex and sub-regions of MTC between groups after controlling age, years of education, CDR-SOB, duration of AD and total intracranial volume. Furthermore, we added total frontal volume as an additional variable to existing variables to investigate that the association between MTC and AD+P is independent of frontal cortex. Results: We found that both left and right hippocampus volume were smaller in AD+P than AD-P. In particular, there was a significant difference in right hippocampus volume between groups after adding total frontal volume as an additional variable to existing variables. Conclusion: We found more severe atrophy of hippocampus is associated with AD+P than AD-P. In addition, atrophy of right hippocampus still remained significantly among AD+P after adjustment for frontal volume. These findings suggest that right hippocampus atrophy is independently associated with AD+P.

No. 196

The Influence of Pre- and Neonatal Exposure to Fluoride on Cyclooxygenases Activity in Rats Brain

Poster Presenter: Karolina Dec

SUMMARY:

Long term exposure to fluorine in pre and neonatal period is dangerous because this element is able to penetrate through the placenta and to cross the blood-brain barrier. Young individuals are less resistant to the toxic influence of fluorine due to the fact that their defensive mechanisms are not fully developed and the permeability of the blood-brain barrier is higher than among adults. Prolonged exposure to fluorine during the development affects metabolism and physiology of neurons and glia which results in the impairment of cognitive functions. The exact mechanisms by which fluorine influence cognitive functions and decreases learning abilities are not clearly defined. Changes in central nervous system functioning after fluorine exposure have been studied in terms of its influence on the synthesis of neurotransmitters and proinflammatory factors, initiation of oxidative stress and the apoptosis of cells. The aim of this study was to determine whether exposure to fluorine during the development affects cyclooxygenases activity and the synthesis of prostanoids. Toxicity model in vivo in male and female Wistar rats was used. Pregnant experimental females received 50 mg/L of sodium fluoride (NaF) in drinking water ad libitum since the first day of pregnancy till the labour and during breast-feeding. Offsprings were being fed by their mothers till 4th week (21st day of their life). After that they have been weaned and they received drinking water with sodium fluoride until the end of 3rd month. Control animals received tap water. Animals were killed and organs were removed including brain. In different brain structures (cerebral cortex, hippocampus, cerebellum and striatum) were measured fluoride concentration, cyclooxyganse-1 (COX-1) and cyclooxygenase-2 (COX-2) genes expression, immunolocalization of the enzymatic proteins and concentration of PGE2 and TXB2. Potentiometry, RT-PCR, immunohistochemistry and immunoenzimatic methods were used to receive the results. Results of this study showed statistically significant changes in the concentration of fluorine in different brain structures between experimental group and control animals. Moreover. significant changes in the expression level of COX-1 and COX-2, and in the concentration of PGE2 and TXB2 were obsered after pre and neonatal exposure to sodium fluoride. Fluorine is able to cross blood-brain barrier and accumulate in central nervous system (CNS). Pre- and neonatal exposure to this element affects COX-genes expression. Prostanoids such as PGE2 and TXB2 - products of COX activity, under normal conditions control some brain functions but changes in their concentrations can initiate inflammation and disturb homeostasis of CNS. Exposure to fluorine

during the development affects neurons metabolism by changes in prostanoids synthesis.

No. 197

Frontal Lobe Syndrome After Heat Stroke in an Asian Chinese Male: A Case Report and Review of Literature

Poster Presenter: Kenny Lim
Co-Author: Fong Yenghoi

SUMMARY:

Introduction: Heat strokes are medical emergencies which are potentially fatal. Neurological deficits are usually transient and persistent deficits are rare. Persistent cerebellar deficits are the most described persistent neurological deficits but frontal lobe dysfunction without cerebellar dysfunction after heat stroke has only been described twice. We report a case with persistent behavioral and psychiatric manifestations persisting for 25 years after heat stroke and outline our management of this case and reviewed the current literature. Case description: Mr L is a 45 years old Chinese male who was admitted to our inpatient psychiatric unit after unmanageable behavior such as walking around naked, urinating in public, theft, physically abusing his mother leading to difficulty in coping by his family. He has co-morbid hypertension, dyslipidemia, subclinical hypothyroidism and suffered from a heat stroke at age 20 during military service. He has no family history of mental illness and his childhood and developmental history was normal. He did well in his elementary school national exams with high-average score, had average scores in high school national exams and was also the head prefect for his high school and a cadet inspector in the police cadet corps. He volunteered with the army but unfortunately 2 weeks into boot camp training, he suffered a heat stroke after a physical test with a temperature of 48.2 degrees Celsius. No neurological deficits were noticed except for forgetfulness. Psychological assessment done 3 months after heat stroke showed acquired cognitive impairment. He was unable to hold steady employment after the incident and was unable to perform simple tasks like dishwashing. He was referred to psychiatric services 10 years after the insult for grandiose ideas and agitation and was treated with mood stabilizers and neuroleptics. CT brain then showed frontal lobe atrophy. He was remanded in the past for outraging the modesty of a woman and arrested a number of times for petty offenses like theft, littering and nuisance and also reported being cheated of his money. He was admitted as inpatient and was assessed to have marked disinhibition and poor executive function and planning. Psychotropics and occupational therapy was prescribed. He reported improvement and was discharged with outpatient occupational therapy and follow ups. Discussion: This case highlights rare behavioral and psychiatric permanent sequelae of heat strokes and highlights the need for early detection of heat injuries to prevent similar cases from occurring in future. The behavioral and psychiatric manifestations described causes a significant and persistent drop in his cognitive and social functioning (losing money to a scam, running afoul of the law). We reviewed the current literature and also describe our strategies in managing his behavior and the follow up community resources to help him remain manageable in the community.

No. 198

Dasotraline for the Treatment of Attention Deficit/Hyperactivity Disorder in Adults: Pooled Analysis of Two Double-Blind Studies

Poster Presenter: Lenard Adler
Co-Authors: Scott Kollins, Seth Hopkins, Robert Goldman, Joyce Tsai, Jay Hsu, Andrei Pikalov, Kenneth S. Koblan, Antony David Loebel, M.D.

SUMMARY:

Background: Dasotraline is a potent inhibitor of pre-synaptic dopamine and norepinephrine with a profile characterized by slow absorption, a long elimination half-life, and low abuse potential. The aim of this pooled post-hoc analysis was to evaluate the efficacy and safety of dasotraline in once-daily doses ranging from 4-8 mg in adults with ADHD. Methods: Data were pooled from two randomized, double-blind, placebo-controlled studies of fixed-doses of dasotraline for the treatment of adults with ADHD. Study 1 was a 4-week study utilizing dasotraline in fixed doses of 4 mg/d (N=116) and 8 mg/d (N=115) vs. placebo (N=110). Significant efficacy was demonstrated on the primary a priori endpoint on the 8 mg/d dose, and trend significance on the 4 mg/d dose. Study 2 was an 8-week study

utilizing dasotraline in fixed doses of 4 mg/d (N=210) and 6 mg/d (N=207) vs. placebo (N=219). The 4 mg/d dose was not significant on the primary endpoint; the 6 mg/d dose showed trend significance. The current pooled analysis included efficacy data from the first 4 weeks of Study 2 (the last common assessment time-point in both studies), and safety data from the full 8 weeks. Efficacy assessments included the ADHD Rating Scale (ADHD RS-IV), and the Clinical Global Impression, Severity scale (CGI-S; modified for ADHD symptoms), and were analyzed using a mixed model for repeated measures (MMRM) analysis. Results: The pooled safety sample consisted of 973 patients (mean age 34 years, 53% male; mean ADHD RS-IV score, 38.5). For the pooled sample, treatment with dasotraline was associated with statistically significant Week 4 improvement in the ADHD RS-IV total score for the 4 mg/d dose ($P<0.05$), 6 mg/d dose ($P<0.05$), and 8 mg/d dose ($P<0.01$). Treatment with dasotraline was associated with statistically significant Week 4 improvement in the CGI-Severity score for the 4 mg/d dose (-1.1; $P=0.015$), 6 mg/d dose (-1.1; $P=0.031$), and 8 mg/d dose (-1.3; $P=0.003$). Discontinuation rates for the pooled sample were as follows (based on the full duration of each study): dasotraline 4 mg/d (30.1%), 6 mg/d (38.6%), 8 mg/d (50.4%), and placebo (19.5%). The most frequent adverse events associated with dasotraline were insomnia, decreased appetite, and dry mouth. The majority of adverse events were mild-to-moderate in severity. There were no clinically meaningful changes blood pressure or heart rate on dasotraline. Conclusions: This pooled post-hoc analysis found dasotraline (4-8 mg/d) to be a safe and efficacious treatment for ADHD in adults that provided steady-state, 24-hour coverage with once-daily dosing.

No. 199

Leveraging Manual Annotation and Machine Learning to Improve School Safety

Poster Presenter: Alycia Bachtel, B.A.
Lead Author: Drew H. Barzman, M.D.
Co-Authors: Marcus Griffey, B.A., Yizhao Ni, Ph.D., Hannah Jackson, B.A., Kenneth Lin, M.D., Michael Sorter, M.D.

SUMMARY:
Background: School violence and victimization are notable topics in the media, with school shootings/ suicide and reports of school related bullying headlining multimedia outlets. Methods: Researchers conducted evaluations on 103 (49% male to 51% female ratio) participants who were recruited from the Cincinnati Children's Hospital Medical Center inpatient units, outpatient clinics and Emergency department. Participants ranged from ages 12-18 and were actively enrolled in 74 traditional public schools (non-online education). All participants were not in the custody of the state or county. Collateral from guardians was gathered prior to participant evaluation. An open-ended list of questions was used to initiate the evaluations. Each participant was also asked questions from the Brief Rating of Aggression by Children and Adolescents (BRACHA-School Version) and the School Safety Scale (SSS). Evaluations were recorded and transcribed into text documents. Results: The 103 transcripts were annotated using a carefully created set of guidelines, where the keywords identified were placed into one of twelve specific categories (e.g., "impulsivity", "negative feelings, thoughts or acts of subject" and "negative feelings, thoughts or acts of others"). A Pearson Correlation coefficient was conducted, showing trending significance of "Risk to others" with five annotation categories. "Negative feelings thoughts or actions of subject" (0.48), "Negative feelings thoughts or acts of others"(0.40), "Illegal acts or contact with the Judicial system by subject" (0.31), "Violent media or video games"(0.44) and "Violent acts or thoughts of subjects"(0.68) all showed a positive correlation. An unpaired T-test was conducted and results for each of these categories were found to be significant at the $P<.01$ level. By leveraging natural language processing and machine learning technologies, we further developed a computerized model to automatically analyze interview transcripts and predict if a student has high risk of violence towards others. The area under the ROC curve achieved by the model was 91.4%, indicating that more than 90% of subjects received

No. 200

Utilization of Mobile Clinics to Deliver Prevention and Early Intervention Mental Health Services in a County Population (2015–2016)

Poster Presenter: Julia Luu Hoang, M.D.

Co-Author: Shalin Rajesh Patel, M.D.

SUMMARY:
Objective: The Prevention and Early Intervention Mobile Services (PEIMS) is an approach to the inaccessibility of mental health services in undersevered communities. Mobile units are able to optimize care with delivery of four behavioral preventions: Parent-Child Interaction Therapy (PCIT), Incredible Years (IY), Positive Parenting Program (Triple P), and Trauma-Focused Cognitive Behavioral Therapy (TF-CBT). Methods: Mobile clinics provide services at different elementary schools. Mental Health service enrollment and utilization are recorded in an electronic health record between the fiscal year 2015-2016. The outcome measure of early behavioral preventions used scales such as: Eyberg Child Behavior Inventory (ECBI), Sutter-Eyberg Student Behavior Inventory (SESBI), Child Behavior Checklist (CBCL), Parent Stress Index (PSI), and Therapy Attitude Inventory (TAI). Results: PCIT: 103 children received PCIT/MH services, 69% were male, 56.3% were Hispanic/Latino, and 63.1% were ages 4-5. Countywide there was a statistically significant decrease in the frequency of child problem behaviors. TF-CBT: 2 of the 3 children showed improvement in mental health functioning. Strong Kid's Group: 4 children were enrolled, CBCL scores decreased for internalized and externalized behaviors. Incredible Years Dinosaur School: 18 children enrolled, ECBI problem score showed a 51.4% decrease. SESBI score had decrease 23.6% for problem score and 6.8% for intensity score. Mobile PEI Parent Consultations: 86 parent consultations, where problems listening and tantrums were the two frequently discussed concerns during parent consultations. Mobile PEI Provider Consultations: 19 provider consultations, with 79% involving a child of focus. TCIT Provider Training: Coaching was provided to 8 teachers and 7 teacher assistants. SESBI scores indicate that there was a decrease in the perception and frequency of child's behavior in the classroom after teachers received TCIT coaching. Outreach: 18 events throughout the community. 6 out of 17 were presentations, 6 were community meetings, and 5 were public events such as NAMI walk and 2 mental health fairs Conclusion: PEIMS are able to increase outreach to targeted families that include those who have not been able to receive services due to transportation issues, geographical barriers, or due to the fact that their concerns do not meet mental health clinic criteria.

No. 201
WITHDRAWN

No. 202
Social Media's Impact on Non-Suicidal Self-Injury in Adolescents
Poster Presenter: Katarzyna Liwski, D.O.
Co-Author: Matthew Craig Parker, D.O.

SUMMARY:
G.Z., a 14 year old Caucasian female with no psychiatric or medical history, was admitted to an inpatient psychiatric unit with worsening depression for the last four months and new onset of non-suicidal self-injury (cutting). She reported to the interviewer that albeit she was maintaining her academic performance and participating in extracurricular activities, she had been experiencing additional stress due to the ending of her romantic relationship. Like many teenagers, she turned to the internet for help. Initially, she searched for topics such as "breakup" and "depression," which led her to other teenagers' ways of coping with their problems, and ultimately, to tens of thousands of examples of ways in which she can self-harm to relieve depression. She reportedly engaged in the behaviors because she "saw it on Instagram and assumed that if it was helping them, it would help me too." She adamantly denied witnessing or hearing about these actions prior to her foray into the Instagram imagery and reported that only through her exploration of this subject-matter via social media, did she engage in these activities. Given that technology and social media plays an integral aspect in the lives of adolescents, this creates a perilous dichotomy – both allowing teenagers to provide support to one another with the benefit of anonymity; however, also allowing teenagers to be exposed to graphic images depicting self-injurious behaviors that would otherwise be inaccessible. In this poster, we discuss the growing role of social media in the lives of adolescents, its impact on non-suicidal self-injury, and potential future opportunities for policy implementation and reform to protect our youth.

No. 203

Effect of Lurasidone on Cognition in Children and Adolescents With Bipolar Depression: Interim Analysis at Year One of a Two-Year Open-Label Study

Poster Presenter: Katherine Burdick, Ph.D.
Co-Authors: Robert Goldman, Michael Tocco, Ling Deng, Antony David Loebel, M.D.

SUMMARY:

Background: Studies suggest that bipolar disorder is associated with cognitive impairment that is often underrecognized, and may persist during euthymic periods. There is limited research on cognitive function in children and adolescents with bipolar disorder, and the effects of pharmacotherapy on cognition in this population. The aim of the current study was to evaluate the longer-term effects of lurasidone on cognition in children and adolescents with bipolar depression. Methods: Patients 10-17 years with a DSM-5 diagnosis of bipolar I depression were randomized to 6 weeks of double-blind (DB) treatment with lurasidone 20-80 mg/d. Patients who completed 6 weeks of DB treatment were eligible to enroll in a 2-year, open-label (OL) extension study in which patients were continued on lurasidone, or switched from placebo to lurasidone (all patients in the extension study were started on a dose of 20 mg/d). Cognitive function was assessed with the Brief CogState battery, which evaluates four cognitive domains: processing speed, attention/ vigilance, visual learning, and working memory. Based on normative data, an overall cognitive composite Z-score was calculated as the average of the standardized Z-scores for each of the four cognitive domains. The results presented here are based on an interim analysis of data at 1-year. Results: 223 patients completed the 6-week DB study and entered the extension study. At the time of the interim analysis, CogState data were available on 219 patients at OL baseline, 180 patients at week 12, 149 at week 28, and 92 at week 52. The cognitive composite Z-score showed impairment at DB baseline (-0.94). Mean change in Z-score, from DB baseline to OL weeks 0 (OL-baseline), 12, 28, and 52, respectively, were observed for the cognitive composite (+0.00, +0.16, +0.18, +0.23), and for the CogState domains processing speed (-0.15, +0.05, +0.07, +0.02), attention/vigilance (-0.02, +0.19, +0.22, +0.26), visual learning (-0.05, +0.10, +0.14, +0.25), working memory accuracy (-0.05, -0.11, +0.14, +0.07), working memory speed (+0.21, +0.30, +0.28, +0.36). Conclusions: Acute and long-term treatment with lurasidone did not have deleterious effects on cognition in children and adolescents with bipolar depression. Up to one year of treatment with lurasidone was associated with small improvements in cognitive function as measured by the Brief CogState battery.

No. 204

Safety of Long-Term Lurasidone in Children and Adolescents With Bipolar Depression: Interim Analysis at Year One of a Two-Year Open-Label Extension Study

Poster Presenter: Kiki Chang
Co-Authors: Robert Goldman, Andrei Pikalov, Michael Tocco, Ling Deng, Antony David Loebel, M.D.

SUMMARY:

Background: Bipolar I disorder frequently has an early onset, with an estimated prevalence rate of 1.8% in pediatric populations. Early onset is associated with a high degree of chronicity, however, limited data are available on the long-term safety and tolerability of drug therapies in pediatric populations. The aim of the current study was to evaluate the long-term safety and tolerability of lurasidone in children and adolescents with bipolar depression. Method: Patients 10-17 years with a DSM-5 diagnosis of bipolar I depression were randomized to 6 weeks of double-blind (DB) treatment with lurasidone or placebo. Patients who completed the study were eligible to enroll in a 2-year, open-label (OL) extension study in which patients were continued on flexibly-dosed lurasidone (20-80 mg/d), or switched from placebo to lurasidone. These data are the 1-year interim analysis results of the 2-year study. Results: In the short-term study, 347 patients were randomized to lurasidone or placebo (mean age, 14.3 years). A total of 223 patients entered the extension study, and 155 (69.5%) completed 28 weeks of treatment. At the time of the interim analysis, 93 patients (41.7%) had completed 52 weeks of OL treatment, 36 patients were still ongoing and had not reached 52 weeks, and 94 patients had discontinued prior to week 52

(withdrawal of consent, 14.8%; adverse event, 9.4%; lost to follow-up, 7.2%; protocol violation, 6.7%; lack of efficacy, 0.9%; other reasons, 3.1%). The mean dose of lurasidone during 52 weeks of treatment was 55.0 mg/d. The most frequent adverse events were headache (19.7%), nausea (14.3%), anxiety (9.9%), somnolence (8.5%), and vomiting (8.1%). The frequency of akathisia and extrapyramidal symptoms (non-akathisia) was 7.2% and 7.2%, respectively. Small median changes from DB baseline to weeks 28/52 were noted for total cholesterol (-4.5/-5.0 mg/dL), LDL cholesterol (-3.0/0.0 mg/dL), triglycerides (-2.0/-2.0 mg/dL), and hemoglobin A1c (0.0/+0.1 mg/dL); and mean changes in weight at weeks 28/52 were +3.0/+5.0 kg (vs. an expected weight gain of +2.3/+3.9 kg, based on normative CDC data). Median changes in prolactin, from DB baseline to week 28/52, were +2.0/+2.5 ng/mL for females and +1.6/+1.2 ng/mL for males. No patients had a QTcF ?460, or an increase from DB baseline in QTcF of ?60 milliseconds. During 52 weeks of treatment, 10 patients (4.5%) met criteria for treatment-emergent mania. There were no deaths in the study. A total of 4.5% of patients reported suicidal ideation as an adverse event, and 2.2% of patients made a suicide attempt. Conclusion: In children and adolescents with bipolar depression, up to 52 weeks of treatment with lurasidone was generally well-tolerated, with headache, nausea and anxiety being the most common adverse events. Minimal effects were observed on weight, metabolic parameters, and prolactin levels.

No. 205

#Cutting: Addressing the Issue of Self-Injury on Social Media

Poster Presenter: Martha J. Ignaszewski, M.D.
Co-Authors: Kelli Marie Ruby, D.O., Shadi Zaghloul, M.D., Stephanie M. Daly, M.D.

SUMMARY:

Worldwide, self-inflicted injury is the second leading cause of death for young people aged 15 to 19 years, with a lifetime prevalence ranging from 17 to 39% in adolescence and 13.4% in early adulthood. Recent studies indicate that young people who self harm are more likely to seek information and support from informal networks, rather than healthcare professionals, with a high value placed on peer-to-peer online media networks. With the advent of smartphones and increased accessibility to the internet, adolescents are increasingly exposed to potentially dangerous content on various social media platforms. Our poster will explore typical content accessed on Tumblr, Twitter, Instagram, and other common social media sites about non-suicidal self-injury (NSSI). Methods: We aim to improve clinician understanding of online content through presentation of selected content regarding self harm, and provide statistics about online and social media utilization through a PubMed literature review. Results: Research suggests that there was a major increase in mental health issues in 2012-2012 when smartphones were starting to be used by the majority of teens, up to 92% by 2015. Youth who spent more time on screen activities were significantly more likely to have high depressive symptoms or at least one suicide-related outcome, with a relative risk of 34% increased likelihood of at least one suicide-related outcome when using electronic devices for 3+ hours per day. Adolescents low in in-person social interaction and high in social media use reported the highest level of depressive symptoms. This may be due to content accessed, as evidenced by a 2017 study that found that 82% of randomly selected posts from Tumblr were related to depression, suicide or self-harm, and of these 15% and 14%, respectively, contained themes of self-harm and suicide. Screen time, may have a larger effect on adolescent girls' mental health than boys. Other research suggests that internet and social media can be used beneficially as a forum to target adolescent health promotion through discussion forums. Conclusions: With limited ways to block this content and the challenge of effective censoring, providers need to be aware of available research and statistics about social media use and access to self harm content, in order to help youth and families in navigating this readily accessible material.

No. 206

Thirteen Reasons Why Mental Health Professionals Need to Be Informed About Mental Health as Depicted in the Media

Poster Presenter: Reena Kumar, M.B.B.S.
Co-Authors: Michael David Ross, M.D., Megan M. White, M.D.

SUMMARY:

New television shows and books relating to what it is like to have a mental health disorder have changed how the general public perceives mental health treatment. The television series "13 reasons why" was at the forefront of the news in early 2017 with the release of the controversial Netflix original series. The television show created very strong reactions from viewers, including by several sources to have increased internet searches relating to suicide ideation. Several patients at our affiliated inpatient psychiatric child and adolescent unit presented with chief complaints relating to the television series. From its vivid depiction of the suicide scene of it's main character to vivid scenes documenting sexual assault, several professionals in the mental health field speculated different reasons why this television series may have failed to accomplish its goal of increasing suicide awareness. General public need to be more aware regarding the effects of media portrayal of the shows.

No. 207

Efficacy of Lurasidone in Child and Adolescent Patients With Bipolar I Depression and Anxiety: A Post Hoc Analysis

Poster Presenter: Mark S. Owens, D.O.
Co-Authors: Michael Tocco, Andrei Pikalov, Ling Deng, Robert Goldman, Antony David Loebel, M.D.

SUMMARY:

Background: Anxiety is a common feature of depression in adults as well as children and adolescents, and is associated with increased depression severity and chronicity, and greater functional impairment. The aim of this post-hoc analysis was to evaluate the efficacy of lurasidone in treating pediatric patients with bipolar depression who presented with high levels of anxiety. Methods: Data in this analysis were derived from a study (1) of patients 10-17 years of age with a DSM-5 diagnosis of bipolar I depression who were randomized to 6 weeks of double-blind treatment with lurasidone 20-80 mg/d (N=173) or placebo (N=170). The primary endpoint was change from Baseline to Week 6 in the Children's Depression Rating Scale, Revised (CDRS-R) total score; the key secondary endpoint was change in the Clinical Global Impression, Bipolar Severity (CGI-BP-S) depression score. We analyzed efficacy in the subgroup of patients who presented with moderate-to-severe anxiety (higher, with baseline Pediatric Anxiety Rating Scale [PARS] score ≥15) and mild-to-low anxiety (lower, with baseline PARS score <15). Endpoint change in the CDRS-R total and CGI-BP-S depression scores were analyzed using a mixed model for repeated measures analysis for patients with high and low levels of anxiety. Results: At baseline, 112/343 patients (32.7%) met criteria for high levels of anxiety (mean CDRS-R, 62.1; mean PARS, 19.7) and 67.3% met criteria for low levels of anxiety (CDRS-R, 57.4; PARS, 7.0). Treatment with lurasidone was associated with significantly greater improvement at week 6 vs. placebo on the CDRS-R total score in patients with higher levels of anxiety (-22.9 vs. –15.8; P=0.004; effect size, 0.58) and in patients with lower levels of anxiety (-20.4 vs. -15.3; P=0.004; effect size, 0.40). Treatment with lurasidone was also associated with significantly greater improvement at week 6 on the CGI-BP-S score in patients with higher levels of anxiety (-1.73 vs. -0.98; P=0.0002; effect size, 0.75) and in patients with lower levels of anxiety (-1.38 vs. -1.09; P<0.05; effect size, 0.28). In the higher anxiety group, treatment with lurasidone was associated with numerically greater reduction at week 6 vs. placebo in the PARS score (-6.2 vs. -5.3; n.s.). Conclusions: In this post-hoc analysis, treatment with lurasidone significantly improved depressive symptoms in child and adolescent patients with bipolar depression who presented with moderate-to-severe levels of concurrent anxiety. Notably, antidepressant effect sizes were larger in patients with prominent anxiety.

No. 208

Diagnosing Autism in Toddlers and Preschool Children Using the Checklist for Autism Spectrum Disorder

Poster Presenter: Raman Baweja
Co-Author: Susan Mayes

SUMMARY:

Background: Brief, cost-effective instruments for routine clinical use are needed to diagnose autism in toddlers and preschoolers so that these children can access intervention proven to be most effective if delivered during the preschool years. Method: The study determined if toddlers and preschoolers earned scores similar to older children on the 30-

item Checklist for Autism Spectrum Disorder (CASD) and the 6-item CASD-Short Form (SF) in 1,266 children with autism (1-17 years). Scores for preschoolers with autism were compared to those for 97 preschoolers with disorders other than autism and with 65 typical preschoolers. The CASD and CASD-SF are completed by a clinician based on a 10-15 minute semi-structured interview with the parent combined with teacher/child care provider report and observations of the child. The CASD and CASD-SF have excellent diagnostic accuracy (>97%) and high agreement with established autism instruments. Results: For children with autism, CASD and CASD-SF scores did not differ between toddlers and preschoolers, but toddler/preschool CASD scores were higher than scores for older children. CASD-SF scores did not differ between any age groups. In the typical toddler/preschool sample, CASD and CASD-SF scores correctly identified 100% and 96.9%, respectively, as not having autism. For toddlers and preschoolers with disorders other than autism, 100% and 96.2% were correctly classified. Conclusions: The CASD and CASD-SF are very sensitive to the presence and absence of autism in toddlers and preschoolers, offering clinicians a diagnostic instrument that is brief, easy to administer and score, and clinically practical.

No. 209

Characteristics of Patients Seen in the Mental Health Service of Garrahan Hospital

Poster Presenter: Valeria Greif
Co-Authors: Mariana Treibel, Sofia Arroyo

SUMMARY:

The aim of the present poster is to assess the rate of mental disorders in children and adolescents between 9 and 16 years of age seen as outpatients at and referred from the Departments of Neurology and Clinical Pediatrics to the Department of Mental Health of Garrahan Hosptal between July 2016 and May 2017. Material and methods: An prospective, observational, and crosssectional study was conducted. On admission, parents were interviewed and the DISC IV (Diagnostic Interview Schedule for Children IV) was administered in the online version for children validated in Argentina in parents or children as corresponded, to make or rule out the diagnosis of a mental disorder. Subsequently, the appropriate feedback interview took place. Results: Overall, 70.5% of the population was diagnosed according to the DISC IV. The most common disorders were disruptive behaviors (attention deficit disorder with or without hyperactivity and impulsivity or ADHD) followed by anxiety disorders. Girls more often had internalizing disorders, mostly separation anxiety (31.2%) and panic attacks (25%). Boys more frequently presented with externalizing disorders, mainly ADHD (39.3%) and oppositional defiant disorder (ODD) (21.4%). On the other hand, 47.7% of the children and adolescents assessed presented with a chronic underlying organic disease. Regarding the administration of the DISC IV, a positive diagnosis was made in 75% of the patients without a chronic underlying disease and in 66.7% of those with an organic disease. Conclusions: A high rate of mental disorders was observed in our population of outpatients. An analysis of the divergence found between different patient groups may be useful for the modification ofdiagnostic and therapeutic strategies leading to a better quality of care.

No. 210

Differential Expression of PAI in Psychotic Spectrum Disorders: A Case-Control Study

Poster Presenter: Benjamin Fey, M.D.
Co-Author: Rodney Uy, M.D.

SUMMARY:

Background: Elevated levels of plasminogen activator inhibitor 1 (PAI-1), have been described in patients with major depression and schizophrenia. However, its association with psychotic spectrum disorders remains elusive. The PAI-1 promoter is activated by insulin, glucose, triglycerides, angiotensin and leptin, a hormone produced by adipocytes. First-episode psychosis or medication naïve patients with schizophrenia have a high prevalence of elevated fasting glucose and insulin levels, hypertriglyceridemia and high blood pressure. Stress-induced thrombosis regulation in schizophrenia patients has been suggested to be by PAI-1. Objective: The primary objective of this study was to assess the plasma levels of PAI-1 in patients undergoing psychotic episodes as compared to those in healthy controls. Our secondary objectives include elucidating if there is a correlation between the PAI-

1 levels and severity of psychotic symptoms. Methods: In this IRB-approved prospective case-control study, peripheral blood samples were collected from psychiatric inpatients and healthy age, gender and race-matched subjects. They were administered BPRS and CGI scales and levels of PAI-1 were determined by ELISA. Patients with history of anti-phospholipid antibody syndrome, history of systemic lupus erythematous, and any deficiency of coagulation factors, were excluded from the study. Data collected included anthropometrical measures, medical / psychiatric / psychosocial and substance abuse history and were analyzed using the SPSS statistical software. Results: Of the total of 77 adult patients (average age, 41.6±13.2 years; 54% female) enrolled in the study, 50% have schizoaffective disorder diagnosis. Preliminary data show that plasma levels of PAI-1 in patients with schizoaffective disorder is significantly lower as compared to that in control subjects ($p = 0.027$). PAI-1 levels were higher in female healthy controls but lower in patients compared to their male counterparts. Post-hoc analyses also show differential expression of circulating PAI-1 when stratified by race. Conclusions: Our study shows that PAI-1 has the potential to be a biomarker for diagnosing schizoaffective disorder. Further, the data support the growing body of evidence pointing to a role for coagulation factors and inflammatory markers in the pathophysiology of schizophrenia. However, instead of focusing only on schizophrenia as in many prior biomarker search studies, we address the heterogeneity of psychotic spectrum disorder. This study takes into account the context of psychosis (whether purely psychotic or driven by mood or a mix of both) which makes it more real world and clinically relevant.

No. 211

Profile of T-Cell Lymphocyte Subsets in Patients With Schizophrenia

Poster Presenter: Cigdem Sahbaz

SUMMARY:

Background: Schizophrenia has been associated with increased level of peripheral pro-inflammatory markers. These findings have supported to conceptualise schizophrenia as a chronic low-grade inflammatory disorder. The underlying mechanism of this phenomenon may include changes in circulating cells and their activation profiles. An investigation of immune cell subsets and T-cell activation profiles might be helpful to understand the mechanism of the immunopathogenesis in schizophrenia. **Methods:** A large panel of monocyte and lymphocyte subpopulations were identified by multi-color flow cytometry in whole blood. In order to evaluate monocyte and specific lymphocyte subsets, cells were stained with combinations of the following monoclonal human antibodies: anti-CD14, anti-CD3 FITC, anti-CD4 PE, anti-CD8 APC, anti-CD19 PE, anti-CD20 APC, anti-CD1656 PE. Peripheral Blood Mononuclear Cells (PBMC) were isolated and stained with the human FoxP3 kit (eBioscience) containing anti-CD4/anti-CD25 and intracellular anti-Foxp3 on day 0 and day 3. PBMCs were cultured for 72 hours and stimulated with anti-CD3. **Results:** 41 stable-chronic subjects (mean age=41,09, 41.5% female) with schizophrenia (all medicated) and 40 age-sex-smoking-BMI status matched controls (mean age=40.8, 40% female) were recruited in this study. Schizophrenic patients showed a higher percentage of CD14+ ($p<0.05$), CD19+ ($p<0.05$), CD20+ ($p<0.05$), CD4+CD25+ ($p<0.001$), CD4+CD+25FoxP3 ($p<0.001$) cells and a lower percentage of CD3+ ($p<0.001$), CD3+CD4+ ($p<0.001$) cells compared to healthy controls. After 72h in vitro stimulation percentage of CD4+CD25+($p<0.001$) activated T cells was found still significantly higher ($p<0.001$). **Conclusion:** Our data suggest that high level of T cell immune activation with dysfunction of T regulatory cells (CD4+CD25+FoxP3) and change of Th cells profiles might cause an imbalance in T cell-mediated immunity and high level of inflammation in schizophrenia.

No. 212

The Role of Lymphocyte Dopamine Transporter in Romantic Lovers

Poster Presenter: Donatella Marazziti, M.D.
Co-Authors: Federico Mucci, Stefano Baroni, Armando Piccinni

SUMMARY:

Introduction: Romantic love is a human and universal phenomenon present in all cultures and societies, characterized by specific emotions, cognitive processes, and behaviors [1]. It is now

believed that the different features of love may be regulated by specific neural circuits and influenced by monoamines [serotonin (5-HT), norepinephrine (NE), dopamine (DA)], peptides (oxytocin),and hormones, likely through intertwined processes [1,2]. Although the role of DA in sexual arousal and behavior in humans is established, data in romantic love are still meager and are mainly based on brain imaging studies [2]. No information is available on direct evaluation of DA and/or DA markers in love. Human blood cells, such as platelets and lymphocytes, express the DA transporter (DAT) protein that is identical to that found in presynaptic neurons [3]. Given the lack of data on DAT in love, the aim of the present study was therefore to explore this protein in resting lymphocytes of 30 subjects in the early stage of romantic love, as compared with 30 subjects who had a long-lasting relationship. Subjects and methods: Thirty subjects of both sexes (15 women and 15 men) involved in a romantic relationship for no longer than 6 months (mean ± SD: 3 ± 1) were included in the study. They were compared with a similar group of healthy subjects (15 women and 15 men, aged between 20 and 40 years, mean ± SD: 29.4 ± 5) who were in a long-lasting (more than 2 years, mean ± SD: 27 ± 8 months) relationship. DAT was assessed by means of the binding of [3H]-WIN 35,428 and of the specific reuptake of [3H]-DA to the membranes of resting lymphocytes. A specific questionnaire (romantic love scale - RLS) was developed by us, consisting of a self-report instrument comprising 14 items that explore the presence, frequency, and duration of feelings and behaviors related to love. The difference of biological parameters between the 2 groups of subjects was assessed by means of the non parametric Mann–Whitney analysis. Results: The results of the present study showed that subjects in the early phase of romantic love were characterized by changes of the DAT, as assessed by means of the specific binding of [3H]-WIN 35,428 to resting lymphocyte membranes, and [3H]-DA reuptake, as compared with a similar group of control subjects. Discussion and conclusions: According to our knowledge, these results represent the first report of alterations of the DAT in lymphocyte membranes of romantic lovers, that is to say, they would indicate an alteration of a peripheral marker of the DA system. It is not possible at this stage to conclude whether the overall alterations of lymphocyte DAT are a primary or secondary phenomenon, although, in any case, they would suggest the presence of increased DA levels in romantic lover

No. 213

Prenatal and Epigenetic Alterations of the Androgen System in Child Sexual Offenders

Poster Presenter: Tillmann Kruger

SUMMARY:

Child sexual offending places a serious burden on society and medicine. The androgen system is closely linked to sexual development and behavior; however, assessments of predominantly peripheral markers involving different kinds of offenders with and without paraphilias have yielded mixed results (Mohnke et al., 2014; Tenbergen et al., 2015). Therefore, the current investigation used a 2 x 2 factorial paradigm within the NeMUP* study consortium in order to control for offense status and sexual preference in the assessment of genetic, epigenetic, prenatal, and plasma markers of the androgen system. The study aimed to explore whether alterations of these markers might be attributable to sexual preference (pedophilia) and/or offense status (child sexual offense). Blood samples from 194 subjects (57 pedophiles with child sexual offending (P+CSO), 45 pedophiles without child sexual offending (P-CSO), 20 non-pedophilic child sexual offenders (C+CSO) and 72 controls (C-CSO)) matched for age and intelligence were assessed for markers of prenatal brain androgenization (D2:D4 finger length ratio), genetic parameters of androgen receptor function (polymorphic Cysteine-Adenine-Guanine (CAG) repeat sequence length), epigenetic regulation (methylation status of androgen receptor), and peripheral hormones (free and total testosterone, SHBG, cortisol, prolactin). Subjects also received a comprehensive clinical screening. Independent of their sexual preference, child sexual offenders showed higher levels of impulsivity, increased rates of self-perceived traumatization, and signs of elevated prenatal androgen exposure compared with non-offending pedophiles and controls. The methylation status of the androgen receptor gene was also higher in child sexual offenders, indicating lower functionality of the testosterone system, and accompanied by lower

peripheral testosterone levels. CAG repeat lengths did not differ between the groups, although there was an interaction effect between offense status, methylation level, and CAG repeats. Notably, markers of prenatal androgenization and the methylation status of the androgen receptor gene were correlated with the total number of sexual offenses committed. This is the first multi-site study of comprehensively clinically screened child sexual offenders with and without pedophilia to demonstrate alterations of the androgen system on a prenatal, epigenetic, and endocrine level. None of the major findings was specific for pedophilia, but they were for CSO. The findings support theories of testosterone-linked abnormalities in early brain development in delinquent behavior, and suggest possible interactions of testosterone receptor gene methylation and plasma testosterone with environmental factors.

No. 214

Single Voxel Proton Magnetic Resonance Spectroscopy in Adolescents Girls Victims of Sexual Abuse With PTSD Treated With Interpersonal Psychoterapy

Poster Presenter: Ana Carolina Coelho Milani, M.D., Ph.D.

Co-Authors: Felipe Benatti de Cillo, M.D., Maria Eugenia Mesquita, M.D., Ph.D., Adriana Corrêa, Psy.D., Hugo Cogo-Moreira, Ph.D., Samara Hipolito Nitzsche, Psy.D., Marcelo Mello, M.D., Ph.D., Andrea Feijo-Mello, M.D., Ph.D., Andrea Jackowski, Ph.D.

SUMMARY:

Background: Proton magnetic resonance spectroscopy (MRS) recorded from the brain allows for noninvasive quantification of neural tissues metabolites, using a conventional MRI scanner. The anterior cingulate gyrus (ACG) is involved in the extinction of conditioned fear responses and it is implicated in the pathophysiology of Postttraumatic stress disorder (PTSD). Our goal was to investigate the ACG n-acethylaspartate (NAA), choline (Cho), creatine (Cr), and glutamate (Glu) levels in a pilot longitudinal study with adolescents victims of sexual abuse that were submitted to a group interpersonal therapy (IPT) intervention. Methods: Six female patients with PTSD (mean age=15.58 y/o) were submitted to a brain MRS scan in 3T Phillips Achieva scanner using a single voxel in the ACG with an isotropic resolution ($2x2x2cm^3$) in the baseline and after a 14 weeks treatment with group IPT. The MRS images were processed using Tarquin. Results: Two patients were excluded from this study (1 drop-out and 1 processing error). The means (μ) and standard deviations (SD) for the four patients pre-measures were: Cho (μ=2.652, SD=0.282), Cr (μ=12.128, SD=0.567), Glu (μ=6.875, SD=0.219), and NAA (μ=12.064, SD=0.342). The follow-up measures were: Cho (μ=2.822, SD=0.253), Cr (μ=11.708, SD=0.478), Glu (μ=6.522, SD=0.311), NAA (μ=11.973, SD=0.352). Therefore, in terms of raw mean difference from pre and post evaluation, we observed that the Cho level increased, and Cr, Glu, and NAA levels decreased. The Wilcoxon's sign z-value, p-values, and effect sizes (measured by rho, r) comparing pre and post values are described as following: Cho=-1.826 (p-value=0.068, r=0.645);

No. 215

The Impact of PTSD and Trauma-Exposure on Cortical Thickness in a Sample of Children and Adolescents (Aged 7–17)

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SUMMARY:

Background: Child abuse is a global problem with serious life-long consequences including mental disorders such as posttraumatic stress disorder (PTSD). Brain development is affected during childhood and adolescence by many factors, including maltreatment and many forms of violence. Because alterations in brain development may have a long-lasting impact, characterizing trauma-related changes in brain structure in a pediatric sample is important to determine the psychobiological consequences of childhood traumatization, to clarify the etiology and/or clinical progress of PTSD, and to provide novel strategies to target the prevention, detection and treatment of PTSD. Methods: Forty-nine children and adolescents (35 female; ages 7-17) were recruited in São Paulo, Brazil. Participants belonged to three groups: 1) trauma-exposed children with PTSD or subthreshold PTSD (PTSD), 2)

trauma-exposed children without PTSD (EXP), and 3) healthy controls (HC). MRI scans were obtained using a 1.5 Siemens and a 3.0 Tesla Philips scanner. FreeSurfer analysis augmented with manual editing by trained staff members was utilized to evaluate cortical thickness, and age was used as a covariate. Assessment for trauma and PTSD symptoms were conducted using the Childhood Trauma Questionnaire, Child Behavior Checklist, Kiddie-SADS, and clinical interview by a child psychiatrist. A $p < 0.05$ was considered statistically significant with cluster-wise correction for multiple comparisons. Results: Several regions in the left hemisphere showed thicker cortices in individuals with PTSD compared to HC, including: middle temporal gyrus, superior frontal gyrus, and orbital frontal cortex. The insula was also found to be thicker in PTSD vs HC, when exploratory analyses were performed (voxel-wise uncorrected $p < 0.05$). Increased cortical thickness was also found in EXP compared to HC in the precentral gyrus bilaterally with a trend also suggesting increased cortical thickness in the precentral gyrus in PTSD VS EXP(voxel-wise uncorrected $p < 0.05$). Conclusions: This line of research could extend our knowledge of the neurobiology of PTSD in children and adolescents.